ANNEX 1 Key Source Analysis

The U.S. provides an analysis of key sources of emissions found in this report in order to ensure accuracy and reliability of inventory estimates. The IPCC's *Good Practice Guidance* (IPCC 2000) defines a key source category as a "[source category] that is prioritized within the national inventory system because its estimate has a significant influence on a country's total inventory of direct greenhouse gases in terms of the absolute level of emissions, the trend in emissions, or both." By definition, key source categories are sources that have the greatest contribution to the absolute overall level of national emissions. In addition, when an entire time series of emission estimates is prepared, a thorough investigation of key source categories must also account for the influence of trends of individual source categories. Therefore, a trend assessment is conducted to identify source categories for which significant uncertainty in the estimate would have considerable effects on overall emission trends. This analysis culls out source categories that diverge from the overall trend in national emissions. Finally, a qualitative evaluation of key source categories should be performed, in order to capture any key source categories that were not identified in either of the quantitative analyses.

The methodology for conducting a key source analysis, as defined by IPCC's *Good Practice Guidance* (IPCC 2000), includes:

- Tier 1 approach (including both level and trend assessments);
- Tier 2 approach (including both level and trend assessments, and incorporating uncertainty analysis); and
- Qualitative approach.

This Annex presents an analysis of key source categories; discusses Tier 1, Tier 2, and qualitative approaches to identifying key sources; provides level and trend assessment equations; and provides a brief statistical evaluation of IPCC's quantitative methodologies for defining key sources.

Table 1-1 presents the key source categories for the United States using emissions data in this report, and ranked according to their sector and global warming potential-weighted emissions in 2002. The table also identifies the criteria used in identifying these source categories (i.e., level, trend, and/or qualitative assessments).

Table 1-1: Key Source Categories for the United States (1990-2002) Based on Tier 1 Approach

IPCC Source Categories	Gas	Level	Trend	Quala	2002 Emissions (Tg CO ₂ Eq.)
Energy					
CO ₂ Emissions from Stationary Combustion – Coal	CO_2	✓	✓		2,005.6
Mobile Combustion: Road & Other	CO_2	✓	✓		1,534.4
CO ₂ Emissions from Stationary Combustion – Gas	CO_2	✓	✓		1,160.6
CO ₂ Emissions from Stationary Combustion – Oil	CO_2	✓	✓		680.1
Mobile Combustion: Aviation	CO_2	✓	✓		177.6
Fugitive Emissions from Natural Gas Operations	CH ₄	✓	✓		121.8
Fugitive Emissions from Coal Mining & Handling	CH ₄	✓	✓		52.2
Mobile Combustion: Marine	CO_2	✓			52.4
Mobile Combustion: Road & Other	N_2O	✓			50.7
Fugitive Emissions from Oil Operations	CH ₄		✓		23.2
International Bunker Fuels ^b	Several			✓	87.7
Non-Energy Use of Fossil Fuel ^b	CO_2			✓	260.6
Industrial Processes					
Emissions from Substitutes for Ozone Depleting Substances	Several	✓	✓		91.7
CO ₂ Emissions from Iron and Steel Production	CO_2	✓	✓		54.4
CO ₂ Emissions from Cement Production	CO_2	✓	✓		42.9
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	✓	✓		19.8
SF ₆ Emissions from Electrical Equipment	SF ₆		✓		14.8
N ₂ O Emissions from Adipic Acid Production	N_2O	_	✓		5.9

¹ See chapter 7 "Methodological Choice and Recalculation" in IPCC (2000).

< http://www.ipcc-nggip.iges.or.jp/public/gp/gpgaum.htm>

PFC Emissions from Aluminum Production	PFCs		✓	5.2
Agriculture				
Direct N ₂ O Emissions from Agricultural Soils	N_2O	✓	✓	209.9
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	✓	✓	114.4
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N_2O	✓	✓	77.4
CH ₄ Emissions from Manure Management	CH ₄	✓		39.5
Waste				
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	✓	✓	193.0
CH ₄ Emissions from Wastewater Handling	CH ₄	✓		28.7
CO ₂ Emissions from Waste Incineration	CO_2		✓	18.8
Subtotal				6,775.0
Total Emissions				6,934.6
Percent of Total				97.7%

^aQualitative criteria.

Notes: Sinks (e.g., LUCF, Landfill Carbon Storage) are not included in this analysis. The Tier 1 approach for identifying key source categories does not directly include assessment of uncertainty in emissions estimates.

Table 1-2 provides a complete listing of source categories by IPCC sector and with additional comments on the criteria used in identifying key source categories. Specifically, the level assessment was performed for each year that inventory data was available (i.e., 1990 to 2002). As the emissions change over time, categories may fall under or over the threshold for being a key source. The following points should be noted regarding the key sources identified.

Due to the relative quantity of CO₂ emissions from fossil fuel combustion—particularly from mobile combustion in road vehicles and stationary combustion of coal, gas, and oil—these sources contributed most to each year's level assessment. Additionally, the following sources were the largest contributors to the level assessments for each year (listed in descending order as appear in recent years):

- Direct N₂O from agricultural soils;
- CH₄ from solid waste disposal sites;
- CO₂ emissions from mobile combustion in the aviation sector;
- Fugitive emissions from natural gas operations;
- CH₄ from enteric fermentation in domestic livestock;
- Indirect N₂O emissions from nitrogen used in agriculture;
- CO₂ emissions from iron and steel production;
- Fugitive emissions from coal mining;
- N₂O emissions from mobile combustion in road vehicles; and
- CO₂ emissions from cement production.

The remaining key sources identified under the level assessment varied by year. The following five source categories were determined to be key using the level assessment for only part of the complete time series:

- HFC and PFC emissions from substitutes for ozone depleting substances (1996-2002);
- CO₂ emissions from mobile combustion in the marine sector (1990-1997, 1999-2000, 2002);
- HFC-23 emissions from HCFC-22 manufacture (1990-1996, 1998);
- CH₄ Emissions from manure management (1990-1999, 2001); and
- CH₄ Emissions from wastewater handling (1995).

Although other sources have fluctuated by greater percentages since 1990, by virtue of their size, CO₂ emissions from mobile combustion from road vehicles and stationary combustion of coal, and oil are the greatest contributors to the overall trend for 2002. The fourth largest contributor to the overall trend in 2002—jumping

bEmissions from these sources not included in totals.

ahead of CO₂ emissions from stationary combustion of gas—is emissions from substitutes for ozone depleting substances (ODSs). These emissions have grown quickly with the Montreal Protocol phase-out of ODSs.

Fugitive emissions from coal mining and PFC emissions from aluminum manufacturing have decreased by approximately 36 and 71 percent, respectively, from 1990 through 2002. Reductions in emissions from coal mining are primarily due to EPA's voluntary coalbed methane capture program and the mining of less gassy coal than in previous years. PFC emissions have decreased primarily as a result of emission reduction activities by the aluminum industry.

The remaining source categories that were identified as key sources based solely on a trend assessment are listed below.

- Fugitive emissions from oil operations;
- SF₆ emissions from electrical equipment;
- N₂O emissions from adipic acid production;
- PFC emissions from aluminum production; and
- CO₂ emissions from waste incineration.

In addition to conducting Tier 1 level and trend assessments, a qualitative assessment of the source categories, as described in the IPCC's *Good Practice Guidance* (IPCC 2000), was conducted to capture any key sources that were not identified by either quantitative method. Two additional key sources were identified using this qualitative assessment. A brief discussion of the reasoning for the qualitative designation is given below:

- International bunker fuels are fuels consumed for aviation or marine international transport activities, and emissions from these fuels are reported separately from totals in accordance with IPCC guidelines. If these emissions were included in the totals, bunker fuels would qualify as a key source according to the Tier 1 approach. The amount of uncertainty associated with estimation of emissions from international bunker fuels also supports the qualification of this source category as key.
- Non-energy uses of fossil fuels represent a significant percentage of the total carbon inventory, and the idea
 that small changes in storage factors for these non-energy uses may result in large changes in storage and
 emissions qualifies this source category as key.

Following the text of this Annex, Table 1-3 through Table 1-15 contain each individual year's level assessment and contain further detail on where each source falls within the analysis. Table 1-16 details the trend assessment for 1990 through 2002.

Table 1-2: U.S Greenhouse Gas Inventory Source Categories Based on Tier 1 Approach

	D!4	2002	Key Source		
IPCC Source Categories	Direct GHG	Emissions (Tg CO ₂ Eq.)	Category Flag?	ID Criteria	Comments
Energy					
CO ₂ Emissions from Stationary Combustion - Coal	CO_2	2,005.6	✓	L, T	All years
CO ₂ Emissions from Stationary Combustion - Oil	CO_2	680.1	✓	L, T	All years
CO ₂ Emissions from Stationary Combustion - Gas	CO_2	1,160.6	✓	L, T	All years
CO ₂ Emissions from Stationary Combustion – Geothermal	CO_2	0.3			,
CO ₂ Emissions from Natural Gas Flaring	CO_2	5.3			
Non-CO ₂ Emissions from Stationary Combustion	CH_4	6.9			
Non-CO ₂ Emissions from Stationary Combustion	N_2O	14.0			
Mobile Combustion: Road & Other	CO_2	1,534.4	✓	L, T	All years
Mobile Combustion: Road & Other	CH ₄	4.0			,
Mobile Combustion: Road & Other	N_2O	50.7	✓	L	All years
Mobile Combustion: Aviation	CO_2	177.6	✓	L, T	All years
Mobile Combustion: Aviation	CH_4	0.1			,
Mobile Combustion: Aviation	N_2O	1.7			
Mobile Combustion: Marine	CO ₂	52.4	✓	L	Level in 1990 - 1997, 1999 - 2000, 2002
Mobile Combustion: Marine	CH_4	0.1			
Mobile Combustion: Marine	N_2O	0.4			

Fugitive Emissions from Coal Mining & Handling	CH ₄	52.2	✓	L, T	All years
Fugitive Emissions from Abandoned Coal Mines	CH ₄	4.1			
Fugitive Emissions from Natural Gas Operations	CH ₄	121.8	✓	L, T	All years
Fugitive Emissions from Oil Operations	CH ₄	23.2	✓	T	
International Bunker Fuelsa	Several	87.7	✓	Q	
Non-Energy Use of Fossil Fuel ^a	CO_2	260.6	✓	Q	
Industrial Processes					
CO ₂ Emissions from Cement Production	CO_2	42.9	✓	L, T	All years
CO ₂ Emissions from Iron and Steel Production	CO_2	54.4	✓	L, T	All years
CO ₂ Emissions from Lime Production	CO ₂	12.3		=, .	, ,
CO ₂ Emissions from Limestone and Dolomite Use	CO ₂	5.8			
	CO ₂	17.7			
Application	. 002	.,,,			
CO ₂ Emissions from Phosphoric Acid Production	CO_2	1.3			
CO ₂ Emissions from Titanium Dioxide Production	CO ₂	2.0			
CO ₂ Emissions from Ferroalloys	CO ₂	1.2			
	CO ₂	1.3			
CO ₂ Emissions from CO ₂ Consumption					
CO ₂ Emissions from Soda Ash Manufacture and Consumption		4.1			
CO ₂ Emissions from Aluminum Production	CO ₂	4.2			
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.0			
CH ₄ Emissions from Silicon Carbide Production	CH ₄	+			
CH ₄ Emissions from Petrochemical Production	CH ₄	1.5	_	_	
N ₂ O Emissions from Adipic Acid Production	N ₂ O	5.9	✓	T	
N ₂ O Emissions from Nitric Acid Production	N_2O	16.7			
N ₂ O Emissions from N ₂ O Product Usage	N_2O	4.8			
PFC Emissions from Aluminum Production	PFCs	5.2	✓	T	
SF ₆ Emissions from Magnesium Production	SF ₆	2.4			
SF ₆ Emissions from Electrical Equipment	SF ₆	14.8	✓	T	
HFC, PFC, and SF ₆ Emissions from Semiconductor	Several	4.4			
Manufacturing					
Emissions from Substitutes for Ozone Depleting Substances	Several	91.7	✓	L, T	Level from 1996 - 2002
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	19.8	✓	L, T	Level in 1990 - 1996,
					1998
Agriculture					
CH ₄ Emissions from Enteric Fermentation in Domestic	: CH ₄	114.4	✓	L, T	All years
Livestock				,	,
CH ₄ Emissions from Manure Management	CH ₄	39.5	✓	L	Level in 1990 – 1999,
			•	_	2001
N ₂ O Emissions from Manure Management	N_2O	17.8			200.
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	209.9	✓	L, T	All years
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	77.4	<i>\</i>	L, T	All years
CH ₄ Emissions from Rice Production	CH ₄	6.8	•	L, ·	7 iii yeers
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7			
N ₂ O Emissions from Agricultural Residue Burning	N ₂ O	0.4			
	IV2O	0.4			
Waste CH. Emissions from Solid Wasto Disposal Sitos	CH ₄	102.0	,	ΙT	All years
CH ₄ Emissions from Solid Waste Disposal Sites		193.0	√	L, T	All years
CH ₄ Emissions from Wastewater Handling	CH ₄	28.7	✓	L	Level in 1995
N ₂ O Emissions from Wastewater Handling	N ₂ O	15.6	,	т	
CO ₂ Emissions from Waste Incineration	CO ₂	18.8	✓	T	
N ₂ O Emissions from Waste Incineration	N ₂ O	0.4			

^a Emissions from these sources not included in totals.

Notes: Sinks (e.g., LUCF, Landfill Carbon Storage) are not included in this analysis. The Tier 1 approach for identifying key source categories does not directly include assessment of uncertainty in emissions estimates.

Tier 1 Approach

The Tier 1 method for identifying key source categories assesses the impacts of all IPCC-defined source categories on the level and trend of the national emission inventory for the 1990 through 2002 time-series, but works independently of any formal uncertainty analysis. Although conducting a Tier 1 key source analysis is very valuable in improving the U.S. inventory, it would be ideal to incorporate the results of an uncertainty analysis into the key source analysis in order to be able to take into account the level of uncertainty associated with each estimate.

⁺ Does not exceed 0.05 Tg CO₂ Eq.

Although quantitative uncertainty analyses have been conducted for almost every U.S. emission source, an assessment of the uncertainty of all source categories required before uncertainties can be taken into account for the key source analysis. See the description of the Tier 2 approach for further explanation.

When using a Tier 1 approach for the *level*, a predetermined cumulative emissions threshold is used to identify key source categories. When source categories are sorted in order of decreasing emissions, those that fall at the top of the list and cumulatively account for 95 percent of emissions are considered key source categories. The 95 percent threshold was established based on an evaluation of several inventories, and was designed to establish a general level where the key source category analysis covers approximately 75 to 92 percent of inventory uncertainty. The Tier 1 approach for the *trend* uses a 95 percent contribution threshold of the cumulative contribution to the trend assessment metric, which was also designed to establish a general level where the key source category analysis covers 90 percent of inventory uncertainty. The Tier 1 method is completed using a simple spreadsheet analysis based on equations for both level and trend assessments that are described in detail below. It is the current approach that the United States is taking to identify key source categories of greenhouse gas emissions until a rigorous uncertainty analysis is completed.

Tier 2 Approach

IPCC recommends that inventory agencies use the Tier 2 method for identifying key source categories if nationally derived source-level uncertainties are measured. The Tier 2 approach is a more detailed analysis that builds on the Tier 1 approach by multiplying the results of the Tier 1 analysis by the relative uncertainty of each source category. This method is likely to reduce the number of key source categories under consideration. Using the Tier 2 approach, key source categories represent 90 percent of the uncertainty in the national inventory, as opposed to those that sum to the pre-determined cumulative emissions or trend threshold. A simple spreadsheet version accounts for the uncertainty contribution by applying the source category percentage uncertainty estimates to the Tier 1 level and trend assessments.

The U.S. EPA is in the process of developing a robust plan to support data gathering for both a Tier 1 and/or a Monte Carlo level analysis. Where a Monte Carlo approach to uncertainty analysis has been undertaken, uncertainty estimates for each source category have been developed based on (a) source category-specific input variables, such as activity data and emission factors, (b) the statistical properties underlying the input variables (i.e., the characteristics of the probability distributions of the input variables, such as mean and standard deviation in the case of a normal distribution), and (c) the mathematical relationship between the input variables used to estimate the emissions for each source category (e.g., emissions = activity data * emission factor). As part of a multi-year effort, the United States has already developed quantitative uncertainty estimates for most source categories. However, because quantitative estimates of uncertainty are not yet available for all source categories, it is premature to conduct a Tier 2 key source analysis at this point. Future inventories will incorporate this Tier 2 approach.

Qualitative Approach

In addition to conducting a quantitative assessment like the ones described above, a variety of qualitative criteria could be applied to identify additional key source categories. The following qualitative criteria for identifying key source categories have been outlined in the *Good Practice Guidance* (IPCC 2000). A source category should be identified as a key source if:

- Mitigation techniques and technologies are being implemented to reduce emissions from the source category that are expected to be reflected in the inventory estimates;
- Significant changes in emissions (i.e., growth or decline) from the source category is expected in the future;
- High uncertainty is evident for the source category; or
- Unexpectedly low or high emissions, or other order of magnitude discrepancies, are apparent for the source category.

In many cases, the results of this qualitative approach to identifying key source categories will overlap with source categories already defined as key source categories through the quantitative analysis. However, the qualitative method may illuminate a few additional key source categories, which should then be included in the final list of key source categories. However, the application of such qualitative criteria are primarily intended to identify any additional source categories that were "just under" the threshold criteria for the level assessment and not for

extremely minor source categories. Among those that are considered key from a qualitative standpoint are emissions from international bunker fuels and non-fuel use of fossil fuels. International bunker fuel emissions are not included in national totals, and are not considered in the level or trend analyses mentioned above, but are considered key from a qualitative standpoint due to their unique position within the emissions accounting framework. Additionally, non-fuel use of fossil fuels is also not included in the level or trend analyses. However, due to the significant quantity of fossil fuels consumed in the United States that are not used to produce energy (generically referred to as feedstocks), it is imperative to understand their fate and to determine how much of the consumption results in emissions, versus in stored carbon.

Level and Trend Assessments of Key Source Categories

Level Assessment

A level assessment was performed for years 1990 to 2002. Key sources were identified as any source category which, when summed in descending order of magnitude for a given year, cumulatively add up to 95 percent of the total level assessment for that year. Level estimates are based upon the following equation:

Source Category Level Assessment = Source Category / Total Estimate $L_{x,t}\!=E_{x,t}\,/\,E_t$

Where:

$$\begin{split} L_{x,t} = & \text{level assessment for source } x \text{ in year t} \\ E_{x,t} = & \text{emissions estimate for source } x \text{ in year t} \end{split}$$

 E_t = total emissions estimate for year t

Trend Assessment

A trend assessment was then conducted to evaluate how significantly the difference between the source category's trend and the overall inventory trend affect the overall trend. This assessment was done by multiplying the difference between the source category trend and the total inventory trend by the source category level assessment. Trend assessments were based upon the following equation:

 $Source\ Category\ Trend\ Assessment = (Source\ Category\ Level\ Assessment) \times \Big|\ (Source\ Category\ Trend\ -\ Total\ Trend)\ \Big|$ $T_{x,t} = L_{x,t} \times \ \Big|\ [((E_{x,t} - E_{x,o}) \ /\ E_{x,t}) - ((E_t - E_o) \ /\ E_t)]\ \Big|$

Where:

 $T_{x,t}$ = trend assessment for source x in year t

 $L_{x,t}$ = level assessment for source x in year t

 $E_{x,t}$ and $E_{x,0}$ = emissions estimates for source x in year t and year 0, respectively

 E_t and E_0 = total emissions estimate for year t and year 0, respectively

0 = base year (e.g., 1990)

The following section of this annex evaluates these key source category analyses. The remainder of the annex summarizes the key source categories identified by these analyses, and quantifies their contribution to total level and trend assessments.

Evaluation of Key Source Identification Methodologies

Level Assessment

The Tier 1 approach for level assessment defines the source category contribution as the percentage of total inventory emissions from that source category. Only emission source categories are considered.² To determine key source categories, the level assessments are sorted in decreasing order, so that the source categories with the highest level assessments appear first. The level assessments are summed until the threshold of 95 percent is reached; all source categories that fall within that cumulative 95 percent are considered key source categories.

Since the Tier 1 approach does not explicitly incorporate uncertainties, the level assessment key source categories will be the largest contributors to total emissions but will not necessarily have large contributions to the total uncertainty. Focusing resources on improving the methodologies for estimating emissions from the source categories with the largest emissions is undesirable if those emissions are estimated relatively precisely using the current methodologies. Nevertheless, the analysis (reported in IPCC 2000) of several inventories that have source category uncertainties showed that about 75 to 92 percent of the total uncertainty could be covered by the source categories in the top 95 percent of emissions.

It is important to note that this key source category analysis can be very sensitive to the definitions of the source categories. If a large source category is split into many subcategories, then the subcategories may have contributions to the total inventory that are too small for those source categories to be considered key. Similarly, a collection of small, non-key source categories adding up to less than 5 percent of total emissions could become key source categories if those source categories were aggregated into a single source category. A consistent approach to addressing this issue is available in the *Good Practice Guidance*. Table 7.1 in IPCC (2000) provides guidance and a suggested list of source categories for analysis, although countries are given some discretion based upon their national circumstances.

Some important components of other source categories were not included in the list of IPCC source categories in the key source category chapter of IPCC's *Good Practice Guidance* (IPCC 2000). These source categories include fossil fuel feedstocks, international bunkers, and emissions from U.S. territories. They are potentially large source categories that often are derived from unique data sources using country-specific methodologies, and may have a significant impact on the uncertainty of the estimates.

Trend Assessment

The Tier 1 approach for trend assessment is defined as the product of the source category level assessment (i.e., source category emissions as a fraction, or percentage, of total emissions) and the absolute difference between the source category trend and the total trend. In turn, the source category trend is defined as the change in source category emissions from the base year to the current year, as a percentage of current year emissions from that source category. The total trend is the percentage change in total inventory emissions from the base year to the current year. Thus, the *source category trend assessment* will be large if the source category represents a large percentage of emissions and/or has a trend that is quite different from the overall inventory trend. Only emissions source categories are considered.³ To determine key source categories, the trend assessments are sorted in decreasing order, so that the source categories with the highest trend assessments appear first. The trend assessments are summed until the threshold of 95 percent is reached; all source categories that fall within that cumulative 95 percent are considered key source categories.

It is important to note that the trend assessment calculation assumes that the base and current year source category emission uncertainties are the same. Therefore, the trend assessment is a useful measure in cases where the percentage uncertainties of the base and current year source category emission levels are thought to be the same. However, its usefulness diminishes when individual source category uncertainties are different between the base year and the current year. Such time series inconsistencies could result from changes in data quality or availability

² The level assessment is intended to be applied to sources and to exclude sinks. Although the assessment would still be valid if sinks were included (as unsigned values), the 95 percent threshold by which sources are deemed "key" would lose significance because it is based on an analysis (Flusgrud et al. 1999) of selected inventories where sinks were excluded.

³ The trend assessment is intended to be applied to sources and to exclude sinks. Although the assessment would still be valid if sinks were included (as unsigned values), the 95 percent threshold by which sources are deemed "key" would lose significance because it is based on an analysis (Flusgrud et al. 1999) of selected inventories where sinks were excluded.

over time. As more rigorous methods to determine uncertainties in emission estimates are applied, it may be necessary to revisit the results of the trend assessments.

Another important caveat to the identification of key source categories through the trend assessment is that, while each individual source category's trend assessment provides a measure of how sensitive the overall trend in the inventory is to the trend of a particular source category, the sum of a number of trend assessments does not yield the total sensitivity of the overall trend to changes in all of those source categories. In other words, the cumulative percentages should not be considered a measure of the percentage contributions to the trend from those source categories.

The trend assessment key source categories are also sensitive to the level of aggregation of the source categories; and the IPCC list of source categories may exclude some important, potentially key source category components.

Table 1-3: 1990 Key Source Tier 1 Analysis - Level Assessment

Table 1-3: 1990 Key Source Tier 1 Analysis - Level Asse					
	Direct	Base Year	Current Year		
10000	Greenhouse	Estimate	Estimate	Level	Cumulative
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)		Assessment	Total
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	1,681.4	0.27	0.27
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,233.4	0.20	0.48
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	978.9	0.16	0.64
CO ₂ Emissions from Stationary Combustion - Oil	CO ₂	695.7	695.7	0.11	0.75
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	210.0	0.03	0.78
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	190.5	0.03	0.81
Mobile Combustion: Aviation	CO ₂	176.9	176.9	0.03	0.84
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	122.0	0.02	0.86
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	117.9	0.02	0.88
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	85.4	0.01	0.90
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	81.9	0.01	0.91
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	72.3	0.01	0.92
Mobile Combustion: Road & Other	N ₂ O	48.5	48.5	0.01	0.93
Mobile Combustion: Marine	CO ₂	48.0	48.0	0.01	0.94
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	35.0	0.01	0.94
CO ₂ Emissions from Cement Production	CO ₂	33.3	33.3	0.01	0.95
CH ₄ Emissions from Manure Management	CH ₄	31.0	31.0	0.01	0.95
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	29.2	< 0.01	0.96
Fugitive Emissions from Oil Operations	CH ₄	28.9	28.9	< 0.01	0.96
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	24.1	< 0.01	0.97
CO ₂ Emissions from Ammonia Production and Urea Application	CO ₂	19.3	19.3	< 0.01	0.97
PFC Emissions from Aluminum Production	PFCs	18.1	18.1	< 0.01	0.97
N ₂ O Emissions from Nitric Acid Production	N ₂ O	17.8	17.8	< 0.01	0.98
N ₂ O Emissions from Manure Management	N ₂ O	16.2	16.2	< 0.01	0.98
N ₂ O Emissions from Adipic Acid Production	N ₂ O	15.2	15.2	< 0.01	0.98
N ₂ O Emissions from Wastewater Handling	N ₂ O	12.8	12.8	< 0.01	0.98
Non-CO ₂ Emissions from Stationary Combustion	N ₂ O	12.6	12.6	< 0.01	0.98
CO ₂ Emissions from Lime Production	CO ₂	11.2	11.2	< 0.01	0.99
CO ₂ Emissions from Waste Incineration	CO ₂	10.9	10.9	<0.01	0.99
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	8.2	< 0.01	0.99
CH ₄ Emissions from Rice Production	CH ₄	7.1	7.1	< 0.01	0.99
CO ₂ Emissions from Aluminum Production	CO ₂	6.3	6.3	< 0.01	0.99
CO ₂ Emissions from Natural Gas Flaring	CO ₂	5.8	5.8	< 0.01	0.99
CO ₂ Emissions from Limestone and Dolomite Use	CO ₂	5.5	5.5	< 0.01	0.99
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	5.4	< 0.01	0.99
Mobile Combustion: Road & Other	CH ₄	4.7	4.7	< 0.01	1.00
N ₂ O Emissions from N ₂ O Product Usage	N ₂ O	4.3	4.3	< 0.01	1.00
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO ₂	4.1	4.1	< 0.01	1.00
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	3.4	< 0.01	1.00
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	2.9	< 0.01	1.00
CO ₂ Emissions from Ferroalloys	CO ₂	2.0	2.0	< 0.01	1.00
Mobile Combustion: Aviation	N_2O	1.7	1.7	< 0.01	1.00
CO ₂ Emissions from Phosphoric Acid Production	CO ₂	1.5	1.5	< 0.01	1.00
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.3	< 0.01	1.00
CO ₂ Emissions from Titanium Dioxide Production	CO ₂	1.3	1.3	<0.01	1.00
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.2	< 0.01	1.00
CO ₂ Emissions from CO ₂ Consumption	CO ₂	0.9	0.9	< 0.01	1.00
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	0.7	< 0.01	1.00
N ₂ O Emissions from Waste Incineration	N ₂ O	0.4	0.4	< 0.01	1.00
Mobile Combustion: Marine	N_2O	0.4	0.4	< 0.01	1.00
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO ₂	0.4	0.4	<0.01	1.00
N ₂ O Emissions from Agricultural Residue Burning	N_2O	0.4	0.4	< 0.01	1.00
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	0.3	< 0.01	1.00
Mobile Combustion: Aviation	CH ₄	0.2	0.2	<0.01	1.00
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	<0.01	1.00
TOTAL		6,129.1	6,129.1	1.00	

Table 1-4: 1991 Key Source Tier 1 Analysis - Level Assessment

Direct Direct Care Care Care Care Care Care Care Care Core Care Care Core Care Care Core Care Car	Table 1-4: 1991 Key Source Tier 1 Analysis - Level Asse			0 11/		
PCC Source Categories		Direct	Base Year	Current Year	Laval	Cumanilation
December Color C	IDCC Source Categories					
Mobile Combustion: Road & Other Co. 1233 4 1,216.7 0.20 0.46						
0.2 Emissions from Salionary Combusion - Oil CO 695.7 660.0 0.16 0.66 0.04 0.75 0.04 0.05 0.03 0.75 0.05 0.03 0.03 0.02 0.03 0.03 0.02 0.03 0.03 0.02 0.03 0.03 0.02 0.03 0.02 0.03 0.02 0.04 0.03 0.08 0.03 0.02 0.04 0.03 0.02 0.04 0.04 0.03 0.08 0.02 0.04 0.04 0.03 0.08 0.03 0.02 0.04 0.04 0.03 0.08 0.02 0.04 0.04 0.04 0.03 0.08 0.04 0.04 0.04 0.02 0.06 0.04 0.0						
Co.2						
Cheffensions from Solid Waste Disposal Sites CH 2100 209.8 0.03 0.79						
Direct Ny.O Emissions from Agricultural Soils Ny.O 190.5 192.3 0.03 0.84	CH, Emissions from Solid Wasta Disposal Sites					
Mobile Combustion: Aviation						
Fugilite Emissions from Natural Gas Operations						
CH Emissions from Enteit Fermentation in Domestic Livestock CH 117.9 117.1 0.02 0.88 Engliste Emissions from Cox Mining and Handling CH 81.9 79.0 0.01 0.97 CO₂ Emissions from Nature and Steel Production CO₂ 85.4 76.2 0.01 0.92 Mobile Combustion. Rad & Other N.O 48.5 50.9 0.01 0.93 Mobile Combustion. Rad & Other N.O 48.5 50.9 0.01 0.93 Mobile Combustion. Rad & Other N.O 48.5 50.9 0.01 0.93 Mobile Combustion. Rad & Other C.O 48.0 45.6 0.01 0.93 Mobile Combustion. Rad & Other C.O 48.0 45.6 0.01 0.93 Mobile Combustion. Rad & Other C.O 48.0 48.6 0.01 0.93 Mobile Combustion. Rad & Other C.O 48.3 3.9 0.01 0.94 Feed Temissions from Commonal Production C.C 48.0 49.1 48.0 0.0 0.94						
Fugilise Emissions from Coal Mining and Handling CH B1.9 79.0 0.01 0.90						
Co. Emissions from Inton and Steel Production CO, B5.4 76.2 0.01 0.91 Indirect NO. De Trissions from Minogen Used in Agriculture N.O 72.3 73.5 0.01 0.92 Mobile Combustion: Road & Other N.O 48.5 50.9 0.01 0.93 Mobile Combustion: Marine CO; 48.0 45.6 0.01 0.94 Co. Emissions from Manure Management CH; 31.0 32.9 0.01 0.94 Co. Emissions from Central Equipment CD; 33.3 32.5 0.01 0.95 Fugliter Emissions from Oil Operations CH; 28.9 29.1 -0.01 0.96 FE Emissions from Oil Operations CH; 28.9 29.1 -0.01 0.96 CH Emissions from Marine Production and Irea Application CH; 24.1 24.5 -0.01 0.97 CD Emissions from Manurular Production NO 17.8 17.8 -0.01 0.97 NO Emissions from Marine Management NO 16.2 16.7 -0.01 0.98 N						
Indirect No Emissions from Nitriogen Used in Agriculture No 48.5 50.9 0.01 0.92						
Mobile Combustion: Name NO 48.5 50.9 0.01 0.93 CH, Emissions from Manure Management CP 48.0 45.6 0.01 0.94 CD, Emissions from Manure Management CH, 31.0 32.9 0.01 0.95 FLORIDE FOR STORING CC2 33.3 32.5 0.01 0.95 Fuglitive Emissions from OII Operations CH, 28.9 29.1 0.01 0.96 FE, Emissions from Electrical Equipment SF.6 29.2 27.8 0.01 0.96 CH Emissions from Manmonia Production and Urea Application Ch 4.1 24.1 24.5 -0.01 0.96 CH Emissions from Manmonia Production No 17.8 17.8 -0.01 0.97 N.O Emissions from Malmirum Production No 17.8 17.8 -0.01 0.97 N.O Emissions from Malmirum Production No 15.2 14.8 -0.01 0.98 N.O Emissions from Malmirum Production No 12.2 14.8 -0.01 0.98						
Mobile Combustion: Marine CO₂ 48.0 45.6 0.01 0.94 CO₂ Emissions from Manue Management CH+ 31.0 2.9 0.01 0.95 CO₂ Emissions from Merce 22 Manufacture HFCs.23 Emissions from MCPC-22 Manufacture HFCs.3 30.0 30.8 0.01 0.95 Fe Emissions from Electrical Equipment SF₂ 29.2 27.8 0.01 0.96 SF₂ Emissions from Marce Handling CH4 24.1 24.5 0.01 0.97 CO₂ Emissions from Marmonia Production and Urea Application CO₂ 19.3 19.2 0.01 0.97 NO Emissions from Mitric Acid Production No 17.8 17.8 0.01 0.97 NO Emissions from Maure Management No 16.2 16.7 0.01 0.98 NO Emissions from Matipacture Handling No 15.2 14.8 0.01 0.98 NO Emissions from Matipacture Handling No 12.6 12.6 0.01 0.98 No-CO₂ Emissions from Wastewater Handling No 12.6 12.6 0.						
CH4 31.0 32.9 0.01 0.94 CQ2 Emissions from Cement Production CQ2 33.3 32.5 0.01 0.95 FIGURE Emissions from DIC Operations CH4 28.9 29.1 <0.01						
CO₂ Emissions from Cereal Production CO₂ 33.3 32.5 0.01 0.95 FFC-23 Emissions from HCFC-22 Manufacture HFCs 35.0 30.8 0.01 0.95 Fugilive Emissions from Off Operations CH4 28.9 29.1 <0.01 0.96 SFa Emissions from Emissions from Operations CH4 24.1 24.5 <0.01 0.96 CHE Emissions from Manure Handing CH4 24.1 24.5 <0.01 0.97 CO₂ Emissions from Ammonia Production and Urea Application CO₂ 19.3 19.2 <0.01 0.97 N20 Emissions from Manure Management N₂O 16.2 16.7 <0.01 0.98 N20 Emissions from Malpia Cald Production PFC S 18.1 15.6 <0.01 0.98 N20 Emissions from Malpia Cald Production N₂O 15.2 14.8 <0.01 0.98 N20 Emissions from Stationary Combustion N₂O 12.8 13.1 <0.01 0.98 N20 Emissions from Waste incineration CO₂ 10.2 12.1 10.0						
HFC.22 Emissions from HCFC-22 Manufacture						
Fuglitive Emissions from Dil Operations						
SF, Emissions from Electrical Equipment SF, CH4 29.2 27.8 < 0.01 0.96 CH4 Emissions from Wastewater Handling CH4 24.1 24.5 <0.01 0.97 N₂O Emissions from Ammonia Production and Urea Application CO₂ 19.3 19.2 <0.01 0.97 N₂O Emissions from Multric Acid Production N₂O 17.8 17.8 <0.01 0.98 N₂O Emissions from Multric Acid Production N₂O 16.2 16.7 <0.01 0.98 N₂O Emissions from Multric Acid Production N₂O 15.2 14.8 <0.01 0.98 N₂O Emissions from Must emand rulp and production N₂O 15.2 14.8 <0.01 0.98 N₂O Emissions from Wastewater Handling N₂O 12.6 12.6 <0.01 0.98 N₂O Emissions from Wastewater Handling N₂O 12.6 12.6 <0.01 0.98 N₂O Emissions from Materia Gas Taining N₂O 12.6 12.6 <0.01 0.99 C₂ Emissions from Sion Sform Stationary Corbuction CH4 8.2 8.4						
CHA Emissions from Mastewaler Handling CHA 24.1 24.5 <.0.01 0.97 CO ₂ Emissions from Ammonia Production and Urea Application N ₂ O 11.8 17.8 <.0.01 0.97 No Emissions from Nitric Acid Production N ₂ O 16.2 16.7 <.0.01 0.97 No Emissions from Nitric Acid Production N ₂ O 16.2 16.7 <.0.01 0.98 No Emissions from Manure Management N ₂ O 16.2 18.1 15.6 <.0.01 0.98 No Emissions from Adipic Acid Production PFCs 18.1 15.6 <.0.01 0.98 No Emissions from Adipic Acid Production N ₂ O 15.2 14.8 <.0.01 0.98 No Emissions from Matipum Production N ₂ O 12.8 13.1 <.0.01 0.98 No Co Emissions from Mastewater Handling N ₂ O 12.8 13.1 <.0.01 0.98 No Co Emissions from Wastewater Handling N ₂ O 12.8 13.1 <.0.01 0.98 No Co Emissions from Waste Maste Management N ₂ O 12.6 12.6 <.0.01 0.98 No Co Emissions from Waste Incineration Co 0.9 12.0 12.0 <.0.01 0.99 Co Emissions from Maste Incineration Co 0.9 11.2 11.0 <.0.01 0.99 Co Emissions from Matipum Production Co 0.9 11.2 11.0 <.0.01 0.99 Co Emissions from Rationary Combustion CH4 7.1 7.0 <.0.01 0.99 Co Emissions from Matural Gas Flating Co 0.6 3 6.4 <.0.01 0.99 Co Emissions from Management Production Co 0.6 6.3 6.4 <.0.01 0.99 Co Emissions from Management Production SF6 5.4 5.1 <.0.01 0.99 Co Emissions from Management Production SF6 5.4 5.1 <.0.01 0.99 Co Emissions from Management Production Co 0.0 5.5 5.0 0.01 0.99 Mobile Combustion: Road & Other No Production Co 0.0 4.1 4.7 4.7 0.01 1.00 No Demissions from Magnesium Production Co 0.0 4.1 4.0 0.01 1.00 No Demissions from Magnesium Production Co 0.0 4.1 4.0 0.01 1.00 No Demissions from Management Management Co 0.0 4.1 4.0 0.01 1.00 No Demissions from Management						
CO₂ Emissions from Ammonia Production and Urea Application CO₂ 19.3 19.2 <0.01 0.97 N₂O Emissions from Mitric Acid Production N₂O 17.8 17.8 <0.01						
N-D Emissions from Milric Acid Production N-D 17.8 17.8 -0.01 0.97 N/O Emissions from Manure Management N-D 16.2 16.7 -0.01 0.98 PFC Emissions from Aluminum Production PFCs 18.1 15.6 -0.01 0.98 N-D Emissions from Adipic Acid Production N-D 15.2 14.8 -0.01 0.98 N-D Emissions from Maste waster Handling N-D 12.8 13.1 -0.01 0.98 Non-CO₂ Emissions from Staltionary Combustion N-D 12.6 12.6 -0.01 0.98 CO₂ Emissions from Staltionary Combustion CO₂ 10.9 12.0 -0.01 0.99 CO₂ Emissions from Staltionary Combustion CH₄ 8.2 8.4 -0.01 0.99 CO₂ Emissions from Staltionary Combustion CH₄ 7.1 7.0 -0.01 0.99 CH- Emissions from Staltionary Combustion CC₂ 6.3 6.4 -0.01 0.99 CO₂ Emissions from Staltionary Combustion CC₂ 5.8 5.9 -0.01 0.99 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
N-D Emissions from Manure Management PFCs 18.1 15.6 < 0.01 0.98 PFC Emissions from Aluminum Production PFCs 18.1 15.6 < 0.01 0.98 N-D Emissions from Aldipic Acid Production N-D 15.2 14.8 < 0.01 0.98 N-D Emissions from Mastewater Handling N-D 15.2 14.8 0.01 0.98 N-D Emissions from Wastewater Handling N-D 12.8 13.1 0.01 0.98 N-D 12.8 13.1 0.01 0.99 CD-D Emissions from Stationary Combustion CD₂ 10.9 12.0 0.01 0.99 CD-D Emissions from Waste Incineration CD₂ 11.2 11.0 0.01 0.99 CD-D Emissions from Waste Incineration CD₂ 11.2 11.0 0.01 0.99 CD-D Emissions from Stationary Combustion CD₂ 11.2 11.0 0.01 0.99 CD-D Emissions from Stationary Combustion CD₂ 11.2 11.0 0.01 0.99 CD-D Emissions from Stationary Combustion CD₄ 14.1 7.1 7.0 0.01 0.99 CD-D Emissions from Maluminum Production CD₂ 6.3 6.4 0.01 0.99 CD₂ Emissions from Maluminum Production CD₂ 5.8 5.9 0.01 0.99 CD₂ Emissions from Malural Gas Flaring CD₂ 5.8 5.9 0.01 0.99 CD₂ Emissions from Malural Gas Flaring CD₂ 5.8 5.9 0.01 0.99 CD₂ Emissions from Magnesium Production CD₂ 5.5 5.0 0.01 0.99 CD₂ Emissions from Magnesium Production CD₂ 5.5 5.0 0.01 0.99 Mobile Combustion: Road & Other CD₄ 14.1 4.0 0.01 1.00 0.99 CD₂ Emissions from N₂O Product Usage CD₂ 5.5 5.0 0.01 1.00 0.99 CD₂ Emissions from N₂O Product Usage CD₂ 5.5 5.0 0.01 1.00 0.99 CD₂ Emissions from Soda Ash Manufacture and Consumption CD₂ 4.1 4.0 0.01 1.00 0.99 CD₂ Emissions from Soda Ash Manufacture and Consumption CD₂ 4.1 4.0 0.01 1.00 0.02 Emissions from Soda Ash Manufacture CD₂ 5.5 5.0 0.01 1.00 0.02 Emissions from Phosphoric Acid Production CD₂ 1.1 1.00 0.02 Emissions from Phosphoric Acid Production CD₂ 1.1 1.00 0.01 1.00 0.02 Emissions from Phosphoric Acid Production CD₂ 1.1 1.00 0.01 1.00 0.02 Emissions from Phosphoric Acid Production CD₂ 1.1 1.00 0.01 1.00 0.02 Emissions from Phosphoric Acid Production CD₂ 1.1 1.00 0.01 1.00 0.02 Emissions from Stationary Combustion - Geothermal Energy CD₂ 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.0						
FC Emissions from Aluminum Production PFCs 18.1 15.6 4.001 0.98 N₂O Emissions from Adipic Acid Production N₂O 15.2 14.8 4.001 0.98 N₂O Emissions from Wastewater Handling N₂O 12.8 13.1 4.001 0.98 Non-CO₂ Emissions from Stationary Combustion N₂O 12.6 12.6 4.001 0.98 CO₂ Emissions from Waste Incineration CO₂ 11.2 11.0 4.001 0.99 CO₂ Emissions from Lime Production CO₂ 11.2 11.0 4.001 0.99 Non-CO₂ Emissions from Stationary Combustion CH₄ 8.2 8.4 4.001 0.99 CO₂ Emissions from Re Production CO₂ 6.3 6.4 4.001 0.99 CO₂ Emissions from Aluminum Production CO₂ 6.3 6.4 4.001 0.99 CO₂ Emissions from Natural Gas Flaring CO₂ 5.8 5.9 4.001 0.99 CO₂ Emissions from Matural Gas Flaring CO₂ 5.8 5.9 4.001 0.99 CO₂ Emissions from Matural Gas Flaring CO₂ 5.5 5.0 4.001 0.99 CO₂ Emissions from Matural Gas Flaring CO₂ 5.5 5.0 4.001 0.99 CO₂ Emissions from Matural Gas Flaring CO₂ 5.5 5.0 4.001 0.99 CO₂ Emissions from Matural Gas Flaring CO₂ 5.5 5.0 4.001 0.99 CO₂ Emissions from Matural Gas Flaring N₂O 4.3 4.2 4.001 0.99 CO₂ Emissions from Matural Cas Flaring N₂O 4.3 4.2 4.001 1.00 CO₂ Emissions from Matural Cas Flaring N₂O 4.3 4.2 4.001 1.00 CO₂ Emissions from Matural Cas Product Usage N₂O 4.3 4.2 4.001 1.00 CO₂ Emissions from Aluminator CO₂ 2.0 1.8 4.001 1.00 CO₂ Emissions from Aluminator CO₂ 2.0 1.8 4.001 1.00 CO₂ Emissions from Phosphoric Acid Production CO₂ 2.0 1.8 4.001 1.00 CO₂ Emissions from Phosphoric Acid Production CO₂ 1.5 1.4 4.001 1.00 CO₂ Emissions from Phosphoric Acid Production CO₂ 1.5 1.4 4.001 1.00 CO₂ Emissions from Phosphoric Acid Production CO₂ 1.3 1.3 4.001 1.00 CO₂ Emissions from Phosphoric Acid Production CO₂ 0.9 0.9 4.001 1.00 CO₂ Emissions from Stationary Combustion - Geothermal Energy CO₂ 0.9 0.9						
N-D Emissions from Adipic Acid Production N-D IS-2 Missions from Wastewater Handling N-D IS-2 Missions from Waste Incineration N-D IS-2 Missions from Waste Incineration N-D IS-2 Missions from Waste Incineration N-D IS-2 Missions from Lime Production N-D Emissions from Stationary Combustion CH4 R-B-2 R-4 R-4 N-D IS-2 R-4						
N₂O Emissions from Wastewater Handling N₂O 12.8 13.1 <0.01 0.98 Non-Co₂ Emissions from Stalionary Combustion N₂O 12.6 12.6 <0.01						
Non-CO₂ Emissions from Stationary Combustion N₂O 12.6 12.6 <0.01 0.98 CO₂ Emissions from Waste Incineration CO₂ 10.9 12.0 <0.01						
CO₂ Emissions from Waste Incineration CO₂ 10.9 12.0 <0.01 0.99 CO₂ Emissions from Lime Production CO₂ 11.2 11.0 <0.01						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		CO_2			< 0.01	0.99
CH₄ Emissions from Rice Production CH₄ 7.1 7.0 <0.01 0.99 CO₂ Emissions from Aluminum Production CO₂ 6.3 6.4 <0.01	CO ₂ Emissions from Lime Production	CO_2	11.2	11.0	< 0.01	0.99
CH₄ Emissions from Rice Production CH₄ 7.1 7.0 <0.01 0.99 CO₂ Emissions from Aluminum Production CO₂ 6.3 6.4 <0.01	Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	8.4	< 0.01	0.99
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		CH ₄	7.1	7.0	< 0.01	0.99
SF6 Emissions from Magnesium Production SF6 (O₂ Emissions from Limestone and Dolomite Use) 5.4 (O₂ 5.5) 5.0 (0.01) 0.99 (O.02 Emissions from Limestone and Dolomite Use) Mobile Combustion: Road & Other CH4 (A.7 4.7) 4.7 (O.01) 1.00 N₂O Emissions from N₂O Product Usage N₂O (D.2 (D.2 (D.2 (D.2 (D.2 (D.2 (D.2 (D.2	CO ₂ Emissions from Aluminum Production	CO_2	6.3	6.4	< 0.01	0.99
	CO ₂ Emissions from Natural Gas Flaring	CO_2	5.8	5.9	< 0.01	0.99
Mobile Combustion: Road & Other CH₄ 4.7 4.7 <0.01 1.00 N₂O Emissions from N₂O Product Usage N₂O 4.3 4.2 <0.01	SF ₆ Emissions from Magnesium Production	SF ₆				0.99
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	CO ₂ Emissions from Limestone and Dolomite Use	CO_2	5.5	5.0	< 0.01	0.99
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Mobile Combustion: Road & Other		4.7		< 0.01	1.00
Fugitive Emissions from Abandoned Coal Mines CH4 3.4 3.4 <0.01 1.00 PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture SF ₆ 2.9 2.9 <0.01	N ₂ O Emissions from N ₂ O Product Usage	N_2O	4.3	4.2	< 0.01	1.00
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						
CO2 Emissions from Ferroalloys CO2 2.0 1.8 <0.01 1.00 Mobile Combustion: Aviation N2O 1.7 1.6 <0.01						
Mobile Combustion: Aviation N2O 1.7 1.6 <0.01 1.00 CO2 Emissions from Phosphoric Acid Production CO2 1.5 1.4 <0.01		SF ₆		2.9	< 0.01	1.00
CO2 Emissions from Phosphoric Acid Production CO2 1.5 1.4 <0.01 1.00 CO2 Emissions from Titanium Dioxide Production CO2 1.3 1.3 <0.01		_				
CO2 Emissions from Titanium Dioxide Production CO2 1.3 1.3 <0.01 1.00 CH4 Emissions from Petrochemical Production CH4 1.2 1.2 <0.01						1.00
CH4 Emissions from Petrochemical Production CH4 1.2 1.2 <0.01 1.00 CH4 Emissions from Iron and Steel Production CH4 1.3 1.2 <0.01						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						
$ \begin{array}{c} \text{CO}_2 \text{ Emissions from CO}_2 \text{ Consumption} & \text{CO}_2 & 0.9 & 0.9 & 0.9 & <0.01 & 1.00 \\ \text{CH}_4 \text{ Emissions from Agricultural Residue Burning} & \text{CH}_4 & 0.7 & 0.6 & <0.01 & 1.00 \\ \text{Emissions from Substitutes for Ozone Depleting Substances} & \text{Several} & 0.3 & 0.6 & <0.01 & 1.00 \\ \text{CO}_2 \text{ Emissions from Stationary Combustion - Geothermal Energy} & \text{CO}_2 & 0.4 & 0.4 & <0.01 & 1.00 \\ \text{Mobile Combustion: Marine} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 1.00 \\ \text{N}_2\text{O Emissions from Agricultural Residue Burning} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 1.00 \\ \text{N}_2\text{O Emissions from Waste Incineration} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 1.00 \\ \text{Mobile Combustion: Aviation} & \text{CH}_4 & 0.2 & 0.1 & <0.01 & 1.00 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 1.00 \\ \text{CH}_4 \text{ Emissions from Silicon Carbide Production} & \text{CH}_4 & 0.0 & 0.0 & <0.01 & 1.00 \\ \text{TOTAL} & \textbf{6,129.1} & \textbf{6,086.3} & 1.00 \\ \end{array}$						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						
Emissions from Substitutes for Ozone Depleting Substances Several 0.3 0.6 <0.01 1.00 CO_2 Emissions from Stationary Combustion - Geothermal Energy CO_2 0.4 0.4 <0.01 1.00 Mobile Combustion: Marine N_2O 0.4 0.4 <0.01 1.00 N_2O Emissions from Agricultural Residue Burning N_2O 0.4 0.4 <0.01 1.00 N_2O Emissions from Waste Incineration N_2O 0.4 0.3 <0.01 1.00 Mobile Combustion: Aviation CH_4 0.2 0.1 <0.01 1.00 Mobile Combustion: Marine CH_4 0.1 0.1 <0.01 1.00 CH_4 Emissions from Silicon Carbide Production CH_4 0.0 0.0 <0.01 1.00 CH_4 Emissions from Silicon Carbide Production CH_4 0.0 0.0 <0.01 1.00 CH_4 Emissions from Silicon Carbide Production CH_4 0.0 0.0 0.0 <0.01 1.00 CH_4 Emissions from Silicon Carbide Production CH_4 0.0 0.0 0.0 <0.01 1.00 CH_4 Emissions from Silicon Carbide Production CH_4 0.0 0.0 0.0 0.0 0.0 CO_4 1.00 CO_4 Emissions from Silicon Carbide Production CH_4 0.0 0.0 0.0 0.0 0.0 0.0 CO_4 1.00						
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						
Mobile Combustion: Aviation CH4 0.2 0.1 <0.01 1.00 Mobile Combustion: Marine CH4 0.1 0.1 <0.01						
Mobile Combustion: Marine CH4 0.1 0.1 <0.01 1.00 CH4 Emissions from Silicon Carbide Production CH4 0.0 0.0 <0.01 1.00 TOTAL 6,129.1 6,086.3 1.00						
CH4 Emissions from Silicon Carbide Production CH4 0.0 0.0 <0.01 1.00 TOTAL 6,129.1 6,086.3 1.00						
TOTAL 6,129.1 6,086.3 1.00						
		CH ₄				1.00
			6,129.1	6,086.3	1.00	

Table 1-5: 1992 Key Source Tier 1 Analysis - Level Assessment

Table 1-5: 1992 Key Source Tier 1 Analysis - Level Asse					
	Direct	Base Year	Current Year		
IDOO O	Greenhouse	Estimate	Estimate	Level	Cumulative
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)		Assessment	Total
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	1,696.6	0.27	0.27
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,240.2	0.20	0.47
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,040.7	0.17	0.64
CO ₂ Emissions from Stationary Combustion - Oil	CO ₂	695.7	683.5	0.11	0.75
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	212.6	0.03	0.79
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	199.3	0.03	0.82
Mobile Combustion: Aviation	CO ₂	176.9	167.1	0.03	0.84
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	124.0	0.02	0.86
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	119.4	0.02	0.88
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	77.1	0.01	0.90
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	75.0	0.01	0.91
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	74.2	0.01	0.92
Mobile Combustion: Marine	CO ₂	48.0	55.7	0.01	0.93
Mobile Combustion: Road & Other	N ₂ O	48.5	54.2	0.01	0.94
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	34.9	0.01	0.94
CO ₂ Emissions from Cement Production	CO ₂	33.3	32.8	0.01	0.95
CH ₄ Emissions from Manure Management	CH ₄	31.0	31.9	0.01	0.95
Fugitive Emissions from Oil Operations	CH ₄	28.9	28.0	<0.01	0.96
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	25.2	< 0.01	0.96
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	25.1	<0.01	0.97
CO ₂ Emissions from Ammonia Production and Urea Application	CO ₂	19.3	20.0	< 0.01	0.97
N ₂ O Emissions from Nitric Acid Production	N ₂ O	17.8	18.3	<0.01	0.97
N ₂ O Emissions from Manure Management	N ₂ O	16.2	16.5	< 0.01	0.98
PFC Emissions from Aluminum Production	PFCs	18.1	14.4	< 0.01	0.98
N ₂ O Emissions from Wastewater Handling	N ₂ O	12.8	13.3	< 0.01	0.98
N₂O Emissions from Adipic Acid Production	N ₂ O	15.2	13.1	< 0.01	0.98
Non-CO ₂ Emissions from Stationary Combustion	N ₂ O	12.6	12.8	<0.01	0.98
CO ₂ Emissions from Waste Incineration	CO ₂	10.9	12.7	< 0.01	0.99
CO ₂ Emissions from Lime Production	CO ₂	11.2	11.4	<0.01	0.99
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	8.7	<0.01	0.99
CH ₄ Emissions from Rice Production	CH ₄	7.1	7.9	<0.01	0.99
CO ₂ Emissions from Aluminum Production	CO ₂ SF ₆	6.3	6.3	<0.01	0.99
SF ₆ Emissions from Magnesium Production	SF6 CO ₂	5.4	5.4 5.3	< 0.01	0.99
CO ₂ Emissions from Natural Gas Flaring	CO_2	5.8 5.5		<0.01	0.99
CO ₂ Emissions from Limestone and Dolomite Use	CO ₂ CH ₄		4.9	< 0.01	0.99
Mobile Combustion: Road & Other CO ₂ Emissions from Soda Ash Manufacture and Consumption	CH ₄ CO ₂	4.7 4.1	4.7 4.1	<0.01 <0.01	1.00
					1.00
N ₂ O Emissions from N ₂ O Product Usage	N ₂ O CH ₄	4.3 3.4	3.9 3.8	<0.01 <0.01	1.00 1.00
Fugitive Emissions from Abandoned Coal Mines PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	3.0 2.9		
	Several			<0.01	1.00
Emissions from Substitutes for Ozone Depleting Substances	CO ₂	0.3	1.9	< 0.01	1.00
CO ₂ Emissions from Ferroalloys Mobile Combustion: Aviation	N ₂ O	2.0 1.7	1.8 1.6	<0.01 <0.01	1.00 1.00
CO ₂ Emissions from Titanium Dioxide Production	CO ₂	1.7	1.5		
	CO ₂	1.5	1.5	<0.01 <0.01	1.00 1.00
CO ₂ Emissions from Phosphoric Acid Production CH ₄ Emissions from Petrochemical Production	CO ₂ CH ₄	1.3	1.3	<0.01	1.00
CH4 Emissions from Iron and Steel Production	CH ₄	1.2	1.3	<0.01	1.00
CO ₂ Emissions from CO ₂ Consumption	CO ₂	0.9	0.8	<0.01	1.00
CH ₄ Emissions from Agricultural Residue Burning	CO ₂ CH ₄	0.7	0.8	<0.01	1.00
Mobile Combustion: Marine	N ₂ O	0.7	0.5	<0.01	1.00
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO ₂	0.4	0.3	<0.01	1.00
	N ₂ O	0.4	0.4		
N ₂ O Emissions from Agricultural Residue Burning N ₂ O Emissions from Waste Incineration		0.4	0.4	<0.01 <0.01	1.00
	N ₂ O CH ₄				1.00
Mobile Combustion: Aviation	CH ₄ CH ₄	0.2 0.1	0.1 0.1	<0.01	1.00
Mobile Combustion: Marine CH. Emissions from Silicon Carbido Production	CH4 CH4	0.1	0.1	<0.01	1.00
CH ₄ Emissions from Silicon Carbide Production TOTAL	OI 14	6,129.1	6,202.2	<0.01 1.00	1.00
Note: Sinks (e.g. LLICE Landfill Carbon Storage) are not include	d in this analysis	0, 127. 1	0,202.2	1.00	

Table 1-6: 1993 Key Source Tier 1 Analysis - Level Assessment

Table 1-6: 1993 Key Source Tier 1 Analysis - Level Ass					
	Direct	Base Year	Current Year		0 1 11
IDOO Common Code and in a	Greenhouse	Estimate	Estimate	Level	Cumulative
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)	(Tg CO ₂ Eq.)	Assessment	Total
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	1,766.7	0.28	0.28
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,277.1	0.20	0.48
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,065.9	0.17	0.65
CO ₂ Emissions from Stationary Combustion - Oil	CO ₂	695.7	672.0	0.11	0.76
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	214.6	0.03	0.79
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	192.5	0.03	0.82
Mobile Combustion: Aviation	CO ₂	176.9	168.1	0.03	0.85
Fugitive Emissions from Natural Gas Operations CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄ CH ₄	122.0 117.9	127.4 118.8	0.02 0.02	0.87 0.89
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	76.2	0.02	0.69
CO ₂ Emissions from Iron and Steel Production	CO ₂	72.3 85.4	69.9	0.01	0.90
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	65.2	0.01	0.91
Mobile Combustion: Road & Other	N ₂ O	48.5	56.6	0.01	0.92
Mobile Combustion: Modu & Other	CO ₂	48.0	48.1	0.01	0.93
CO ₂ Emissions from Cement Production	CO ₂	33.3	34.6	0.01	0.94
CH ₄ Emissions from Manure Management	CH ₄	31.0	32.7	0.01	0.94
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	31.8	0.01	0.95
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	29.5	<0.01	0.96
Fugitive Emissions from Oil Operations	CH ₄	28.9	26.9	<0.01	0.96
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	25.5	<0.01	0.90
CO ₂ Emissions from Ammonia Production and Urea Application	CO ₂	19.3	20.4	<0.01	0.97
N ₂ O Emissions from Nitric Acid Production	N ₂ O	17.8	18.6	<0.01	0.97
N ₂ O Emissions from Manure Management	N ₂ O	16.2	16.9	<0.01	0.98
N ₂ O Emissions from Adipic Acid Production	N ₂ O	15.2	14.0	<0.01	0.98
PFC Emissions from Aluminum Production	PFCs	18.1	13.7	<0.01	0.98
N ₂ O Emissions from Wastewater Handling	N ₂ O	12.8	13.5	<0.01	0.98
CO ₂ Emissions from Waste Incineration	CO ₂	10.9	13.5	<0.01	0.78
Non-CO ₂ Emissions from Stationary Combustion	N ₂ O	12.6	13.0	<0.01	0.70
CO ₂ Emissions from Lime Production	CO ₂	11.2	11.6	<0.01	0.77
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	8.2	<0.01	0.99
CH ₄ Emissions from Rice Production	CH ₄	7.1	7.0	<0.01	0.77
CO ₂ Emissions from Natural Gas Flaring	CO ₂	5.8	6.8	< 0.01	0.99
CO ₂ Emissions from Aluminum Production	CO ₂	6.3	5.8	<0.01	0.99
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	5.5	< 0.01	0.99
CO ₂ Emissions from Limestone and Dolomite Use	CO ₂	5.5	4.9	< 0.01	0.99
Mobile Combustion: Road & Other	CH ₄	4.7	4.7	<0.01	0.99
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	4.6	<0.01	1.00
N ₂ O Emissions from N ₂ O Product Usage	N ₂ O	4.3	4.5	<0.01	1.00
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	4.3	<0.01	1.00
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO ₂	4.1	4.0	< 0.01	1.00
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	3.6	< 0.01	1.00
CO ₂ Emissions from Ferroalloys	CO_2	2.0	1.7	< 0.01	1.00
Mobile Combustion: Aviation	N_2O	1.7	1.6	< 0.01	1.00
CO ₂ Emissions from Titanium Dioxide Production	CO_2	1.3	1.6	< 0.01	1.00
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.4	< 0.01	1.00
CO ₂ Emissions from Phosphoric Acid Production	CO_2	1.5	1.3	< 0.01	1.00
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.3	< 0.01	1.00
CO ₂ Emissions from CO ₂ Consumption	CO_2	0.9	0.8	< 0.01	1.00
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	0.6	< 0.01	1.00
Mobile Combustion: Marine	N_2O	0.4	0.4	< 0.01	1.00
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO_2	0.4	0.4	< 0.01	1.00
N ₂ O Emissions from Waste Incineration	N_2O	0.4	0.4	< 0.01	1.00
N ₂ O Emissions from Agricultural Residue Burning	N_2O	0.4	0.3	< 0.01	1.00
Mobile Combustion: Aviation	CH ₄	0.2	0.1	< 0.01	1.00
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	< 0.01	1.00
TOTAL		6,129.1	6,311.5	1.00	
Note: Sinks (e.g., LUCE Landfill Carbon Storage) are not include	d in this analysis				_

Table 1-7: 1994 Key Source Tier 1 Analysis - Level Assessment

Table 1-7: 1994 Key Source Tier 1 Analysis - Level Asse					
	Direct	Base Year	Current Year		
IDOO C. O. I	Greenhouse	Estimate	Estimate	Level	Cumulative
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)	(Tg CO ₂ Eq.)	Assessment	Total
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	1,776.6	0.28	0.28
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,311.4	0.20	0.48
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,085.2	0.17	0.65 0.75
CO ₂ Emissions from Stationary Combustion - Oil CH ₄ Emissions from Solid Waste Disposal Sites	CO ₂ CH ₄	695.7 210.0	678.7 214.8	0.11 0.03	0.75
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	214.0	0.03	0.79
Mobile Combustion: Aviation	CO ₂	176.9	175.9	0.03	0.85
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	128.0	0.02	0.87
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	120.4	0.02	0.89
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	78.6	0.01	0.90
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	73.6	0.01	0.91
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	65.1	0.01	0.92
Mobile Combustion: Road & Other	N ₂ O	48.5	58.2	0.01	0.93
Mobile Combustion: Marine	CO ₂	48.0	48.4	0.01	0.94
CO ₂ Emissions from Cement Production	CO ₂	33.3	36.1	0.01	0.94
CH ₄ Emissions from Manure Management	CH ₄	31.0	35.2	0.01	0.95
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	31.6	< 0.01	0.95
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	26.8	< 0.01	0.96
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	26.1	< 0.01	0.96
Fugitive Emissions from Oil Operations	CH ₄	28.9	26.0	< 0.01	0.97
CO ₂ Emissions from Ammonia Production and Urea Application	CO_2	19.3	21.1	< 0.01	0.97
N ₂ O Emissions from Nitric Acid Production	N_2O	17.8	19.6	< 0.01	0.97
N ₂ O Emissions from Manure Management	N ₂ O	16.2	16.9	< 0.01	0.97
N ₂ O Emissions from Adipic Acid Production	N_2O	15.2	15.0	< 0.01	0.98
CO ₂ Emissions from Waste Incineration	CO ₂	10.9	14.2	< 0.01	0.98
N ₂ O Emissions from Wastewater Handling	N ₂ O	12.8	14.0	<0.01	0.98
Non-CO ₂ Emissions from Stationary Combustion	N ₂ O	12.6	13.2	< 0.01	0.98
CO ₂ Emissions from Lime Production	CO ₂	11.2	12.1	<0.01	0.99
PFC Emissions from Aluminum Production	PFCs Several	18.1	12.0	< 0.01	0.99
Emissions from Substitutes for Ozone Depleting Substances CH ₄ Emissions from Rice Production	Several CH ₄	0.3 7.1	9.6 8.2	<0.01 <0.01	0.99 0.99
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	8.2	<0.01	0.99
CO ₂ Emissions from Natural Gas Flaring	CO ₂	5.8	6.9	<0.01	0.77
CO ₂ Emissions from Limestone and Dolomite Use	CO ₂	5.5	5.5	<0.01	0.99
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	5.4	<0.01	0.99
CO ₂ Emissions from Aluminum Production	CO ₂	6.3	5.1	<0.01	0.99
Mobile Combustion: Road & Other	CH ₄	4.7	4.7	<0.01	1.00
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	4.5	<0.01	1.00
N ₂ O Emissions from N ₂ O Product Usage	N_2O	4.3	4.5	< 0.01	1.00
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO ₂	4.1	4.0	< 0.01	1.00
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	4.0	< 0.01	1.00
CO ₂ Emissions from Ferroalloys	CO_2	2.0	1.8	< 0.01	1.00
Mobile Combustion: Aviation	N_2O	1.7	1.7	< 0.01	1.00
CO ₂ Emissions from Titanium Dioxide Production	CO_2	1.3	1.7	< 0.01	1.00
CO ₂ Emissions from Phosphoric Acid Production	CO_2	1.5	1.5	< 0.01	1.00
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.5	< 0.01	1.00
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.3	< 0.01	1.00
CO ₂ Emissions from CO ₂ Consumption	CO_2	0.9	0.9	< 0.01	1.00
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	0.8	< 0.01	1.00
N ₂ O Emissions from Agricultural Residue Burning	N ₂ O	0.4	0.5	< 0.01	1.00
Mobile Combustion: Marine	N ₂ O	0.4	0.4	< 0.01	1.00
N ₂ O Emissions from Waste Incineration	N ₂ O	0.4	0.4	< 0.01	1.00
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO ₂	0.4	0.3	< 0.01	1.00
Mobile Combustion: Aviation	CH ₄	0.2	0.1	< 0.01	1.00
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	< 0.01	1.00
TOTAL		6,129.1	6,430.6	1.00	

Table 1-8: 1995 Key Source Tier 1 Analysis - Level Assessment

Table 1-8: 1995 Key Source Tier 1 Analysis - Level Ass					
	Direct	Base Year	Current Year		
	Greenhouse	Estimate	Estimate	Level	Cumulative
IPCC Source Categories	Gas	(Tg CO₂ Eq.)		Assessment	Total
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	1,793.8	0.28	0.28
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,339.6	0.21	0.48
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,134.7	0.17	0.66
CO ₂ Emissions from Stationary Combustion - Oil	CO ₂	695.7	629.1	0.10	0.76
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	213.5	0.03	0.79
Direct N ₂ O Emissions from Agricultural Soils	N_2O	190.5	201.9	0.03	0.82
Mobile Combustion: Aviation	CO ₂	176.9	171.4	0.03	0.85
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	127.2	0.02	0.87
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	123.0	0.02	0.88
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N_2O	72.3	77.6	0.01	0.90
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	74.4	0.01	0.91
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	68.5	0.01	0.92
Mobile Combustion: Road & Other	N_2O	48.5	58.8	0.01	0.93
Mobile Combustion: Marine	CO ₂	48.0	51.2	0.01	0.94
CO ₂ Emissions from Cement Production	CO ₂	33.3	36.8	0.01	0.94
CH ₄ Emissions from Manure Management	CH ₄	31.0	36.0	0.01	0.95
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	27.0	< 0.01	0.95
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	26.7	< 0.01	0.95
Fugitive Emissions from Oil Operations	CH ₄	28.9	25.7	< 0.01	0.96
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	24.3	< 0.01	0.96
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	21.7	< 0.01	0.97
CO ₂ Emissions from Ammonia Production and Urea Application	CO_2	19.3	20.5	< 0.01	0.97
N ₂ O Emissions from Nitric Acid Production	N_2O	17.8	19.9	< 0.01	0.97
N ₂ O Emissions from Adipic Acid Production	N_2O	15.2	17.2	< 0.01	0.97
N ₂ O Emissions from Manure Management	N_2O	16.2	17.1	< 0.01	0.98
CO ₂ Emissions from Waste Incineration	CO_2	10.9	15.7	< 0.01	0.98
N ₂ O Emissions from Wastewater Handling	N_2O	12.8	14.0	< 0.01	0.98
Non-CO ₂ Emissions from Stationary Combustion	N_2O	12.6	13.3	< 0.01	0.98
CO ₂ Emissions from Lime Production	CO_2	11.2	12.8	< 0.01	0.99
PFC Emissions from Aluminum Production	PFCs	18.1	11.8	< 0.01	0.99
CO ₂ Emissions from Natural Gas Flaring	CO_2	5.8	9.0	< 0.01	0.99
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	8.6	< 0.01	0.99
CH ₄ Emissions from Rice Production	CH ₄	7.1	7.6	< 0.01	0.99
CO ₂ Emissions from Limestone and Dolomite Use	CO_2	5.5	7.4	< 0.01	0.99
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	5.6	< 0.01	0.99
CO ₂ Emissions from Aluminum Production	CO_2	6.3	5.3	< 0.01	0.99
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	5.1	< 0.01	1.00
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	5.0	< 0.01	1.00
Mobile Combustion: Road & Other	CH ₄	4.7	4.6	< 0.01	1.00
N ₂ O Emissions from N ₂ O Product Usage	N_2O	4.3	4.5	< 0.01	1.00
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO_2	4.1	4.3	< 0.01	1.00
CO ₂ Emissions from Ferroalloys	CO_2	2.0	1.9	< 0.01	1.00
CO ₂ Emissions from Titanium Dioxide Production	CO_2	1.3	1.7	< 0.01	1.00
Mobile Combustion: Aviation	N_2O	1.7	1.7	< 0.01	1.00
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.5	< 0.01	1.00
CO ₂ Emissions from Phosphoric Acid Production	CO_2	1.5	1.5	< 0.01	1.00
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.3	< 0.01	1.00
CO ₂ Emissions from CO ₂ Consumption	CO_2	0.9	0.8	< 0.01	1.00
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	0.7	< 0.01	1.00
Mobile Combustion: Marine	N_2O	0.4	0.4	< 0.01	1.00
N ₂ O Emissions from Waste Incineration	N_2O	0.4	0.4	< 0.01	1.00
N ₂ O Emissions from Agricultural Residue Burning	N_2O	0.4	0.4	< 0.01	1.00
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO ₂	0.4	0.4	< 0.01	1.00
Mobile Combustion: Aviation	CH ₄	0.2	0.1	< 0.01	1.00
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	< 0.01	1.00
TOTAL		6,129.1	6,484.7	1.00	
Note: Sinks (e.g. LLICE Landfill Carbon Storage) are not include	d in this analysis		.,		

Table 1-9: 1996 Key Source Tier 1 Analysis - Level Assessment

Table 1-9: 1996 Key Source Tier 1 Analysis - Level Ass					
	Direct	Base Year	Current Year	Laval	Cumulativa
IDCC Course Catamories	Greenhouse	Estimate	Estimate	Level	Cumulative
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)		Assessment	Total
CO ₂ Emissions from Stationary Combustion - Coal Mobile Combustion: Road & Other	CO ₂ CO ₂	1,681.4 1,233.4	1,880.7	0.28	0.28 0.49
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,376.9 1,155.1	0.21 0.17	0.49
	CO ₂	695.7	669.2	0.17	0.00
CO ₂ Emissions from Stationary Combustion - Oil Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	209.1	0.10	0.76
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	209.1	0.03	0.79
Mobile Combustion: Aviation	CO ₂	176.9	180.2	0.03	0.85
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	127.4	0.03	0.87
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	120.5	0.02	0.87
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	79.0	0.02	0.90
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	68.3	0.01	0.91
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	63.2	0.01	0.92
Mobile Combustion: Road & Other	N ₂ O	48.5	58.5	0.01	0.93
Mobile Combustion: Marine	CO ₂	48.0	47.8	0.01	0.93
CO ₂ Emissions from Cement Production	CO ₂	33.3	37.1	0.01	0.94
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	35.0	0.01	0.94
CH ₄ Emissions from Manure Management	CH ₄	31.0	34.6	0.01	0.95
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	31.1	<0.01	0.95
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	26.9	<0.01	0.96
Fugitive Emissions from Oil Operations	CH ₄	28.9	25.6	< 0.01	0.96
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	24.3	<0.01	0.97
N ₂ O Emissions from Nitric Acid Production	N ₂ O	17.8	20.7	<0.01	0.97
CO ₂ Emissions from Ammonia Production and Urea Application	CO ₂	19.3	20.3	<0.01	0.97
CO ₂ Emissions from Waste Incineration	CO ₂	10.9	17.2	<0.01	0.97
N ₂ O Emissions from Adipic Acid Production	N ₂ O	15.2	17.0	<0.01	0.98
N ₂ O Emissions from Manure Management	N ₂ O	16.2	17.0	<0.01	0.98
N ₂ O Emissions from Wastewater Handling	N ₂ O	12.8	14.2	<0.01	0.98
Non-CO ₂ Emissions from Stationary Combustion	N ₂ O	12.6	13.9	< 0.01	0.98
CO ₂ Emissions from Lime Production	CO ₂	11.2	13.5	< 0.01	0.99
PFC Emissions from Aluminum Production	PFCs	18.1	12.5	< 0.01	0.99
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	8.8	< 0.01	0.99
CO ₂ Emissions from Natural Gas Flaring	CO_2	5.8	8.5	< 0.01	0.99
CO ₂ Emissions from Limestone and Dolomite Use	CO_2	5.5	7.8	< 0.01	0.99
CH ₄ Emissions from Rice Production	CH ₄	7.1	7.0	< 0.01	0.99
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	6.5	< 0.01	0.99
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	6.0	< 0.01	0.99
CO ₂ Emissions from Aluminum Production	CO_2	6.3	5.6	< 0.01	1.00
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	5.5	< 0.01	1.00
Mobile Combustion: Road & Other	CH ₄	4.7	4.5	< 0.01	1.00
N ₂ O Emissions from N ₂ O Product Usage	N_2O	4.3	4.5	< 0.01	1.00
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO_2	4.1	4.2	< 0.01	1.00
CO ₂ Emissions from Ferroalloys	CO_2	2.0	2.0	< 0.01	1.00
Mobile Combustion: Aviation	N_2O	1.7	1.8	< 0.01	1.00
CO ₂ Emissions from Titanium Dioxide Production	CO_2	1.3	1.7	< 0.01	1.00
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.6	< 0.01	1.00
CO ₂ Emissions from Phosphoric Acid Production	CO_2	1.5	1.6	< 0.01	1.00
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.3	< 0.01	1.00
CO ₂ Emissions from CO ₂ Consumption	CO_2	0.9	0.8	< 0.01	1.00
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	0.8	< 0.01	1.00
N ₂ O Emissions from Agricultural Residue Burning	N_2O	0.4	0.4	< 0.01	1.00
Mobile Combustion: Marine	N_2O	0.4	0.4	< 0.01	1.00
N ₂ O Emissions from Waste Incineration	N_2O	0.4	0.4	< 0.01	1.00
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO_2	0.4	0.4	< 0.01	1.00
Mobile Combustion: Aviation	CH ₄	0.2	0.1	< 0.01	1.00
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	<0.01	1.00
TOTAL		6,129.1	6,687.3	1.00	
Note: Sinks (e.g. LUCE Landfill Carbon Storage) are not include	d in this analysis	· ·	· · · · · · · · · · · · · · · · · · ·	-	

Table 1-10: 1997 Key Source Tier 1 Analysis - Level Assessment

Table 1-10: 1997 Key Source Tier 1 Analysis - Level Ass					
	Direct	Base Year	Current Year	11	0
IDCC Course Cotomories	Greenhouse	Estimate	Estimate	Level	Cumulative
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)		Assessment	Total
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	1,927.8	0.28	0.28
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,402.5	0.21	0.49
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,159.5	0.17	0.66
CO ₂ Emissions from Stationary Combustion - Oil	CO ₂	695.7	681.5	0.10	0.76
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	214.5	0.03	0.80
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	203.4	0.03	0.83
Mobile Combustion: Aviation	CO ₂	176.9	178.9	0.03	0.85
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	126.1	0.02	0.87
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	118.3	0.02	0.89
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	78.7	0.01	0.90
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	71.9	0.01	0.91
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	62.6	0.01	0.92
Mobile Combustion: Road & Other	N ₂ O	48.5	58.3	0.01	0.93
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	46.4	0.01	0.94
CO ₂ Emissions from Cement Production	CO ₂	33.3	38.3	0.01	0.94
CH ₄ Emissions from Manure Management	CH ₄	31.0	36.3	0.01	0.95
Mobile Combustion: Marine	CO ₂	48.0	33.4	<0.01	0.95
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	30.0	< 0.01	0.96
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	27.4	< 0.01	0.96
Fugitive Emissions from Oil Operations	CH ₄	28.9	25.5	< 0.01	0.96
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	21.7	< 0.01	0.97
N ₂ O Emissions from Nitric Acid Production	N_2O	17.8	21.2	< 0.01	0.97
CO ₂ Emissions from Ammonia Production and Urea Application	CO ₂	19.3	20.7	< 0.01	0.97
CO ₂ Emissions from Waste Incineration	CO_2	10.9	17.8	< 0.01	0.98
N ₂ O Emissions from Manure Management	N_2O	16.2	17.3	< 0.01	0.98
N ₂ O Emissions from Wastewater Handling	N_2O	12.8	14.4	< 0.01	0.98
Non-CO ₂ Emissions from Stationary Combustion	N_2O	12.6	14.0	< 0.01	0.98
CO ₂ Emissions from Lime Production	CO_2	11.2	13.7	< 0.01	0.98
PFC Emissions from Aluminum Production	PFCs	18.1	11.0	< 0.01	0.99
N ₂ O Emissions from Adipic Acid Production	N_2O	15.2	10.3	< 0.01	0.99
CO ₂ Emissions from Natural Gas Flaring	CO_2	5.8	7.9	< 0.01	0.99
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	7.8	< 0.01	0.99
CH ₄ Emissions from Rice Production	CH ₄	7.1	7.5	< 0.01	0.99
CO ₂ Emissions from Limestone and Dolomite Use	CO_2	5.5	7.2	< 0.01	0.99
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	6.3	< 0.01	0.99
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	6.3	< 0.01	0.99
CO ₂ Emissions from Aluminum Production	CO ₂	6.3	5.6	< 0.01	1.00
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	5.6	< 0.01	1.00
N ₂ O Emissions from N ₂ O Product Usage	N_2O	4.3	4.8	< 0.01	1.00
Mobile Combustion: Road & Other	CH ₄	4.7	4.5	< 0.01	1.00
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO_2	4.1	4.4	< 0.01	1.00
CO ₂ Emissions from Ferroalloys	CO_2	2.0	2.0	< 0.01	1.00
CO ₂ Emissions from Titanium Dioxide Production	CO_2	1.3	1.8	< 0.01	1.00
Mobile Combustion: Aviation	N_2O	1.7	1.7	< 0.01	1.00
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.6	< 0.01	1.00
CO ₂ Emissions from Phosphoric Acid Production	CO_2	1.5	1.5	< 0.01	1.00
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.3	< 0.01	1.00
CO ₂ Emissions from CO ₂ Consumption	CO_2	0.9	0.8	< 0.01	1.00
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	8.0	< 0.01	1.00
N ₂ O Emissions from Agricultural Residue Burning	N_2O	0.4	0.4	< 0.01	1.00
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO_2	0.4	0.4	< 0.01	1.00
N ₂ O Emissions from Waste Incineration	N_2O	0.4	0.4	< 0.01	1.00
Mobile Combustion: Marine	N_2O	0.4	0.3	< 0.01	1.00
Mobile Combustion: Aviation	CH ₄	0.2	0.2	< 0.01	1.00
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	< 0.01	1.00
TOTAL		6,129.1	6,764.4	1.00	
Note: Sinks (e.g. LUCE Landfill Carbon Storage) are not include	nd in this analysis				

Table 1-11: 1998 Key Source Tier 1 Analysis - Level Assessment

Table 1-11: 1998 Key Source Tier 1 Analysis - Level Assessment							
	Direct	Base Year	Current Year		0 1 11		
IDOO Course Outerados	Greenhouse	Estimate	Estimate		Cumulative		
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)	(Tg CO ₂ Eq.)	Assessment	Total		
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	1,945.0	0.29	0.29		
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,437.0	0.21	0.50		
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,142.2	0.17	0.67		
CO ₂ Emissions from Stationary Combustion - Oil	CO ₂	695.7	679.9	0.10	0.77		
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	215.6	0.03	0.80		
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	196.6	0.03	0.83		
Mobile Combustion: Aviation	CO ₂	176.9	180.8	0.03	0.85		
Fugitive Emissions from Natural Gas Operations CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄ CH ₄	122.0 117.9	124.5 116.7	0.02 0.02	0.87 0.89		
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	78.6	0.02	0.89		
CO ₂ Emissions from Iron and Steel Production	CO ₂	72.3 85.4	67.4	0.01	0.90		
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	62.8	0.01	0.91		
Mobile Combustion: Road & Other	N ₂ O	48.5	57.6	0.01	0.92		
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	56.5	0.01	0.73		
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	40.2	0.01	0.94		
CO ₂ Emissions from Cement Production	CO ₂	33.3	39.2	0.01	0.74		
CH ₄ Emissions from Manure Management	CH ₄	31.0	38.8	0.01	0.95		
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	27.7	<0.01	0.75		
Mobile Combustion: Marine	CO ₂	48.0	27.1	<0.01	0.76		
Fugitive Emissions from Oil Operations	CH ₄	28.9	25.0	<0.01	0.70		
CO ₂ Emissions from Ammonia Production and Urea Application	CO ₂	19.3	21.9	<0.01	0.97		
N ₂ O Emissions from Nitric Acid Production	N ₂ O	17.8	20.9	<0.01	0.77		
N ₂ O Emissions from Manure Management	N ₂ O	16.2	17.3	<0.01	0.97		
CO ₂ Emissions from Waste Incineration	CO ₂	10.9	17.3	<0.01	0.77		
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	17.1	<0.01	0.78		
N ₂ O Emissions from Wastewater Handling	N ₂ O	12.8	14.7	<0.01	0.78		
CO ₂ Emissions from Lime Production	CO ₂	11.2	13.9	< 0.01	0.98		
Non-CO ₂ Emissions from Stationary Combustion	N ₂ O	12.6	13.8	<0.01	0.99		
PFC Emissions from Aluminum Production	PFCs	18.1	9.0	<0.01	0.99		
CH ₄ Emissions from Rice Production	CH ₄	7.1	7.9	<0.01	0.99		
CO ₂ Emissions from Limestone and Dolomite Use	CO ₂	5.5	7.4	<0.01	0.99		
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	7.2	<0.01	0.99		
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	7.1	< 0.01	0.99		
CO ₂ Emissions from Natural Gas Flaring	CO ₂	5.8	6.6	< 0.01	0.99		
N ₂ O Emissions from Adipic Acid Production	N ₂ O	15.2	6.0	< 0.01	0.99		
CO ₂ Emissions from Aluminum Production	CO ₂	6.3	5.8	< 0.01	0.99		
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	5.8	< 0.01	1.00		
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	4.8	< 0.01	1.00		
N ₂ O Emissions from N ₂ O Product Usage	N ₂ O	4.3	4.8	< 0.01	1.00		
Mobile Combustion: Road & Other	CH ₄	4.7	4.4	< 0.01	1.00		
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO_2	4.1	4.3	< 0.01	1.00		
CO ₂ Emissions from Ferroalloys	CO ₂	2.0	2.0	< 0.01	1.00		
CO ₂ Emissions from Titanium Dioxide Production	CO_2	1.3	1.8	< 0.01	1.00		
Mobile Combustion: Aviation	N ₂ O	1.7	1.8	< 0.01	1.00		
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.7	< 0.01	1.00		
CO ₂ Emissions from Phosphoric Acid Production	CO_2	1.5	1.6	< 0.01	1.00		
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.2	< 0.01	1.00		
CO ₂ Emissions from CO ₂ Consumption	CO_2	0.9	0.9	< 0.01	1.00		
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	0.8	< 0.01	1.00		
N ₂ O Emissions from Agricultural Residue Burning	N_2O	0.4	0.5	< 0.01	1.00		
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO ₂	0.4	0.4	< 0.01	1.00		
N₂O Emissions from Waste Incineration	N_2O	0.4	0.3	< 0.01	1.00		
Mobile Combustion: Marine	N ₂ O	0.4	0.2	< 0.01	1.00		
Mobile Combustion: Aviation	CH ₄	0.2	0.1	< 0.01	1.00		
Mobile Combustion: Marine	CH ₄	0.1	0.0	< 0.01	1.00		
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	< 0.01	1.00		
TOTAL		6,129.1	6,790.5	1.00			
Nets Circles (e.g. 11105 e.g. 4611 Centers Cteness) encurstingly of	11 111 111						

Table 1-12: 1999 Key Source Tier 1 Analysis - Level Assessment

Table 1-12: 1999 Key Source Tier 1 Analysis - Level As					
	Direct	Base Year	Current Year		0 1 11
IDOO Course Octobride	Greenhouse	Estimate	Estimate	Level	Cumulative
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)	(Tg CO ₂ Eq.)	Assessment	Total
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	1,946.6	0.28	0.28
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,478.1	0.22	0.50
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,147.9	0.17	0.67
CO ₂ Emissions from Stationary Combustion - Oil	CO ₂	695.7	691.1	0.10	0.77
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	213.5	0.03	0.80
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	197.8	0.03	0.83
Mobile Combustion: Aviation	CO ₂	176.9	186.7	0.03	0.86
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	120.9	0.02	0.87
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	116.6	0.02	0.89
Indirect N₂O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	78.6	0.01	0.90
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	65.8	0.01	0.91
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	64.4	0.01	0.92
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	58.9	0.01	0.93
Mobile Combustion: Road & Other	N ₂ O	48.5	56.5	0.01	0.94
CO ₂ Emissions from Cement Production	CO ₂	33.3	40.0	0.01	0.94
CH ₄ Emissions from Manure Management	CH ₄	31.0	38.6	0.01	0.95
Mobile Combustion: Marine	CO ₂	48.0	38.1	0.01	0.95
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	30.4	< 0.01	0.96
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	28.2	< 0.01	0.96
Fugitive Emissions from Oil Operations	CH ₄	28.9	23.7	<0.01	0.97
CO ₂ Emissions from Ammonia Production and Urea Application	CO ₂	19.3	20.6	< 0.01	0.97
N ₂ O Emissions from Nitric Acid Production	N ₂ O	17.8	20.1	< 0.01	0.97
CO ₂ Emissions from Waste Incineration	CO_2	10.9	17.6	< 0.01	0.97
N ₂ O Emissions from Manure Management	N_2O	16.2	17.4	< 0.01	0.98
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	16.4	< 0.01	0.98
N ₂ O Emissions from Wastewater Handling	N ₂ O	12.8	15.2	< 0.01	0.98
Non-CO ₂ Emissions from Stationary Combustion	N_2O	12.6	13.9	< 0.01	0.98
CO ₂ Emissions from Lime Production	CO_2	11.2	13.5	< 0.01	0.99
PFC Emissions from Aluminum Production	PFCs	18.1	8.9	< 0.01	0.99
CH ₄ Emissions from Rice Production	CH ₄	7.1	8.3	< 0.01	0.99
CO ₂ Emissions from Limestone and Dolomite Use	CO_2	5.5	8.1	< 0.01	0.99
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	7.5	< 0.01	0.99
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	7.2	< 0.01	0.99
CO ₂ Emissions from Natural Gas Flaring	CO ₂	5.8	6.9	< 0.01	0.99
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	6.0	< 0.01	0.99
CO ₂ Emissions from Aluminum Production	CO_2	6.3	5.9	< 0.01	0.99
N ₂ O Emissions from Adipic Acid Production	N_2O	15.2	5.5	< 0.01	1.00
N ₂ O Emissions from N ₂ O Product Usage	N ₂ O	4.3	4.8	< 0.01	1.00
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	4.4	< 0.01	1.00
Mobile Combustion: Road & Other	CH ₄	4.7	4.2	< 0.01	1.00
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO_2	4.1	4.2	< 0.01	1.00
CO ₂ Emissions from Ferroalloys	CO_2	2.0	2.0	< 0.01	1.00
CO ₂ Emissions from Titanium Dioxide Production	CO_2	1.3	1.9	< 0.01	1.00
Mobile Combustion: Aviation	N_2O	1.7	1.8	< 0.01	1.00
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.7	< 0.01	1.00
CO ₂ Emissions from Phosphoric Acid Production	CO_2	1.5	1.5	< 0.01	1.00
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.2	< 0.01	1.00
CO ₂ Emissions from CO ₂ Consumption	CO_2	0.9	0.9	< 0.01	1.00
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	0.8	< 0.01	1.00
N ₂ O Emissions from Agricultural Residue Burning	N_2O	0.4	0.4	< 0.01	1.00
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO_2	0.4	0.4	< 0.01	1.00
Mobile Combustion: Marine	N_2O	0.4	0.3	< 0.01	1.00
N ₂ O Emissions from Waste Incineration	N_2O	0.4	0.3	< 0.01	1.00
Mobile Combustion: Aviation	CH ₄	0.2	0.2	< 0.01	1.00
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	< 0.01	1.00
TOTAL		6,129.1	6,852.5	1.00	
Note: Sinks (e.g. LUCE Landfill Carbon Storage) are not include	nd in this analysis	,			

Table 1-13: 2000 Key Source Tier 1 Analysis - Level Assessment

Table 1-13: 2000 Key Source Tier 1 Analysis - Level As					
	Direct	Base Year	Current Year		0 1 11
IDCC Course Catamories	Greenhouse	Estimate	Estimate	Level	Cumulative
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)	(Tg CO ₂ Eq.)	Assessment	Total
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂ CO ₂	1,681.4	2,034.9	0.29	0.29
Mobile Combustion: Road & Other CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	1,233.4 978.9	1,497.3 1,199.9	0.21 0.17	0.50 0.67
	CO ₂	695.7	1,199.9	0.17	0.67
CO ₂ Emissions from Stationary Combustion - Oil Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	212.6	0.10	0.77
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	199.3	0.03	0.83
Mobile Combustion: Aviation	CO ₂	176.9	193.2	0.03	0.86
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	125.7	0.03	0.87
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	115.7	0.02	0.87
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	77.2	0.02	0.90
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	75.1	0.01	0.91
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	65.7	0.01	0.92
Mobile Combustion: Marine	CO ₂	48.0	59.1	0.01	0.93
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	56.2	0.01	0.94
Mobile Combustion: Road & Other	N ₂ O	48.5	55.0	0.01	0.95
CO ₂ Emissions from Cement Production	CO ₂	33.3	41.2	0.01	0.95
CH ₄ Emissions from Manure Management	CH ₄	31.0	38.0	0.01	0.96
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	29.8	<0.01	0.96
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	28.4	<0.01	0.97
Fugitive Emissions from Oil Operations	CH ₄	28.9	23.5	< 0.01	0.97
CO ₂ Emissions from Ammonia Production and Urea Application	CO ₂	19.3	19.6	<0.01	0.97
N ₂ O Emissions from Nitric Acid Production	N ₂ O	17.8	19.6	< 0.01	0.97
CO ₂ Emissions from Waste Incineration	CO ₂	10.9	18.0	< 0.01	0.98
N₂O Emissions from Manure Management	N ₂ O	16.2	17.7	<0.01	0.98
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	15.9	< 0.01	0.98
N ₂ O Emissions from Wastewater Handling	N_2O	12.8	15.3	<0.01	0.98
Non-CO ₂ Emissions from Stationary Combustion	N ₂ O	12.6	14.4	< 0.01	0.99
CO ₂ Emissions from Lime Production	CO_2	11.2	13.3	< 0.01	0.99
PFC Emissions from Aluminum Production	PFCs	18.1	8.9	< 0.01	0.99
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	7.7	< 0.01	0.99
CH ₄ Emissions from Rice Production	CH ₄	7.1	7.5	< 0.01	0.99
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	6.3	< 0.01	0.99
N ₂ O Emissions from Adipic Acid Production	N_2O	15.2	6.0	< 0.01	0.99
CO ₂ Emissions from Limestone and Dolomite Use	CO_2	5.5	6.0	< 0.01	0.99
CO ₂ Emissions from Natural Gas Flaring	CO_2	5.8	5.8	< 0.01	0.99
CO ₂ Emissions from Aluminum Production	CO_2	6.3	5.7	< 0.01	1.00
N ₂ O Emissions from N ₂ O Product Usage	N_2O	4.3	4.8	< 0.01	1.00
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	4.4	< 0.01	1.00
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO_2	4.1	4.2	< 0.01	1.00
Mobile Combustion: Road & Other	CH ₄	4.7	4.2	< 0.01	1.00
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	3.2	< 0.01	1.00
CO ₂ Emissions from Titanium Dioxide Production	CO_2	1.3	1.9	< 0.01	1.00
Mobile Combustion: Aviation	N_2O	1.7	1.9	< 0.01	1.00
CO ₂ Emissions from Ferroalloys	CO ₂	2.0	1.7	< 0.01	1.00
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.7	< 0.01	1.00
CO ₂ Emissions from Phosphoric Acid Production	CO ₂	1.5	1.4	< 0.01	1.00
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.2	< 0.01	1.00
CO ₂ Emissions from CO ₂ Consumption	CO ₂	0.9	1.0	< 0.01	1.00
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	0.8	< 0.01	1.00
Mobile Combustion: Marine	N ₂ O	0.4	0.5	< 0.01	1.00
N ₂ O Emissions from Agricultural Residue Burning	N ₂ O	0.4	0.5	< 0.01	1.00
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO ₂	0.4	0.4	< 0.01	1.00
N ₂ O Emissions from Waste Incineration	N ₂ O	0.4	0.4	< 0.01	1.00
Mobile Combustion: Aviation	CH ₄	0.2	0.2	< 0.01	1.00
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	<0.01	1.00
TOTAL Note: Sinks (e.g., LUCE Landfill Carbon Storage) are not include	ما ام الم معمل ما	6,129.1	7,038.3	1.00	

Table 1-14: 2001 Key Source Tier 1 Analysis - Level Assessment

Table 1-14: 2001 Key Source Tier 1 Analysis - Level Assessment							
	Direct	Base Year	Current Year				
	Greenhouse	Estimate	Estimate	Level	Cumulative		
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)	(Tg CO ₂ Eq.)		Total		
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	1,968.7	0.29	0.29		
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,510.0	0.22	0.51		
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,149.0	0.17	0.67		
CO ₂ Emissions from Stationary Combustion - Oil	CO ₂	695.7	710.1	0.10	0.78		
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	212.8	0.03	0.81		
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	193.2	0.03	0.83		
Mobile Combustion: Aviation	CO ₂	176.9	183.4	0.03	0.86		
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	124.9	0.02	0.88		
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	114.3	0.02	0.90		
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	83.4	0.01	0.91		
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N_2O	72.3	75.8	0.01	0.92		
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	59.1	0.01	0.93		
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	55.6	0.01	0.94		
Mobile Combustion: Road & Other	N ₂ O	48.5	52.9	0.01	0.94		
CO ₂ Emissions from Cement Production	CO ₂	33.3	41.4	0.01	0.95		
CH ₄ Emissions from Manure Management	CH ₄	31.0	38.8	0.01	0.95		
Mobile Combustion: Marine	CO_2	48.0	37.2	0.01	0.96		
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	28.1	< 0.01	0.96		
Fugitive Emissions from Oil Operations	CH ₄	28.9	23.5	< 0.01	0.97		
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	19.8	< 0.01	0.97		
CO ₂ Emissions from Waste Incineration	CO_2	10.9	18.8	< 0.01	0.97		
N ₂ O Emissions from Manure Management	N_2O	16.2	18.0	< 0.01	0.98		
CO ₂ Emissions from Ammonia Production and Urea Application	CO_2	19.3	16.2	< 0.01	0.98		
N ₂ O Emissions from Nitric Acid Production	N_2O	17.8	15.9	< 0.01	0.98		
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	15.6	< 0.01	0.98		
N ₂ O Emissions from Wastewater Handling	N_2O	12.8	15.4	< 0.01	0.99		
Non-CO ₂ Emissions from Stationary Combustion	N_2O	12.6	13.9	< 0.01	0.99		
CO ₂ Emissions from Lime Production	CO_2	11.2	12.8	< 0.01	0.99		
CH ₄ Emissions from Rice Production	CH ₄	7.1	7.6	< 0.01	0.99		
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	7.2	< 0.01	0.99		
CO ₂ Emissions from Limestone and Dolomite Use	CO_2	5.5	5.7	< 0.01	0.99		
CO ₂ Emissions from Natural Gas Flaring	CO_2	5.8	5.4	< 0.01	0.99		
N ₂ O Emissions from Adipic Acid Production	N_2O	15.2	4.9	< 0.01	0.99		
N ₂ O Emissions from N ₂ O Product Usage	N_2O	4.3	4.8	< 0.01	0.99		
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	4.5	< 0.01	0.99		
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	4.2	< 0.01	1.00		
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO_2	4.1	4.1	< 0.01	1.00		
CO ₂ Emissions from Aluminum Production	CO_2	6.3	4.1	< 0.01	1.00		
Mobile Combustion: Road & Other	CH ₄	4.7	4.1	< 0.01	1.00		
PFC Emissions from Aluminum Production	PFCs	18.1	4.0	< 0.01	1.00		
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	2.5	< 0.01	1.00		
CO ₂ Emissions from Titanium Dioxide Production	CO_2	1.3	1.9	< 0.01	1.00		
Mobile Combustion: Aviation	N_2O	1.7	1.8	< 0.01	1.00		
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.4	< 0.01	1.00		
CO ₂ Emissions from Ferroalloys	CO_2	2.0	1.3	< 0.01	1.00		
CO ₂ Emissions from Phosphoric Acid Production	CO_2	1.5	1.3	< 0.01	1.00		
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.1	< 0.01	1.00		
CO ₂ Emissions from CO ₂ Consumption	CO_2	0.9	8.0	< 0.01	1.00		
CH ₄ Emissions from Agricultural Residue Burning	CH ₄	0.7	0.8	< 0.01	1.00		
N ₂ O Emissions from Agricultural Residue Burning	N_2O	0.4	0.5	< 0.01	1.00		
N ₂ O Emissions from Waste Incineration	N_2O	0.4	0.4	< 0.01	1.00		
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO_2	0.4	0.4	< 0.01	1.00		
Mobile Combustion: Marine	N_2O	0.4	0.3	< 0.01	1.00		
Mobile Combustion: Aviation	CH ₄	0.2	0.1	< 0.01	1.00		
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00		
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	< 0.01	1.00		
TOTAL		6,129.1	6,883.9	1.00			
Note: Sinks (e.g. LLICE Landfill Carbon Storage) are not include	nd in this analysi						

Table 1-15: 2002 Key Source Tier 1 Analysis - Level Assessment

Table 1-15: 2002 Key Source Tier 1 Analysis - Level Assessment							
	Direct	Base Year	Current Year				
	Greenhouse	Estimate	Estimate		Cumulative		
IPCC Source Categories	Gas	(Tg CO ₂ Eq.)		Assessment	Total		
CO ₂ Emissions from Stationary Combustion - Coal	CO ₂	1,681.4	2,005.6	0.29	0.29		
Mobile Combustion: Road & Other	CO ₂	1,233.4	1,534.4	0.22	0.51		
CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,160.6	0.17	0.68		
CO ₂ Emissions from Stationary Combustion - Oil	CO ₂	695.7	680.1	0.10	0.78		
Direct N ₂ O Emissions from Agricultural Soils	N ₂ O	190.5	209.9	0.03	0.81		
CH ₄ Emissions from Solid Waste Disposal Sites	CH ₄	210.0	193.0	0.03	0.83		
Mobile Combustion: Aviation	CO ₂	176.9	177.6	0.03	0.86		
Fugitive Emissions from Natural Gas Operations	CH ₄	122.0	121.8	0.02	0.88		
CH ₄ Emissions from Enteric Fermentation in Domestic Livestock	CH ₄	117.9	114.4	0.02	0.89		
Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	91.7	0.01	0.91		
Indirect N ₂ O Emissions from Nitrogen Used in Agriculture	N ₂ O	72.3	77.4	0.01	0.92		
CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	54.4	0.01	0.93		
Mobile Combustion: Marine	CO ₂	48.0	52.4	0.01	0.93		
Fugitive Emissions from Coal Mining and Handling	CH ₄	81.9	52.2	0.01	0.94		
Mobile Combustion: Road & Other	N_2O	48.5	50.7	0.01	0.95		
CO ₂ Emissions from Cement Production	CO ₂	33.3	42.9	0.01	0.95		
CH₄ Emissions from Manure Management	CH ₄	31.0	39.5	0.01	0.96		
CH ₄ Emissions from Wastewater Handling	CH ₄	24.1	28.7	< 0.01	0.96		
Fugitive Emissions from Oil Operations	CH ₄	28.9	23.2	< 0.01	0.97		
HFC-23 Emissions from HCFC-22 Manufacture	HFCs	35.0	19.8	< 0.01	0.97		
CO ₂ Emissions from Waste Incineration	CO_2	10.9	18.8	< 0.01	0.97		
N ₂ O Emissions from Manure Management	N_2O	16.2	17.8	< 0.01	0.98		
CO ₂ Emissions from Ammonia Production and Urea Application	CO ₂	19.3	17.7	< 0.01	0.98		
N ₂ O Emissions from Nitric Acid Production	N ₂ O	17.8	16.7	< 0.01	0.98		
N ₂ O Emissions from Wastewater Handling	N_2O	12.8	15.6	< 0.01	0.98		
SF ₆ Emissions from Electrical Equipment	SF ₆	29.2	14.8	< 0.01	0.99		
Non-CO ₂ Emissions from Stationary Combustion	N2O	12.6	14.0	< 0.01	0.99		
CO ₂ Emissions from Lime Production	CO ₂	11.2	12.3	< 0.01	0.99		
Non-CO ₂ Emissions from Stationary Combustion	CH ₄	8.2	6.9	<0.01	0.99		
CH ₄ Emissions from Rice Production	CH ₄	7.1	6.8	< 0.01	0.99		
N ₂ O Emissions from Adipic Acid Production	N ₂ O	15.2	5.9	<0.01	0.99		
CO ₂ Emissions from Limestone and Dolomite Use	CO ₂	5.5	5.8	<0.01	0.99		
CO ₂ Emissions from Natural Gas Flaring	CO ₂	5.8	5.3	< 0.01	0.99		
PFC Emissions from Aluminum Production	PFCs	18.1	5.2	< 0.01	0.99		
N ₂ O Emissions from N ₂ O Product Usage	N ₂ O	4.3	4.8	< 0.01	0.99		
PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture	SF ₆	2.9	4.4	<0.01	1.00		
CO ₂ Emissions from Aluminum Production	CO ₂	6.3	4.2	< 0.01	1.00		
CO ₂ Emissions from Soda Ash Manufacture and Consumption	CO ₂	4.1	4.1	< 0.01	1.00		
Fugitive Emissions from Abandoned Coal Mines	CH ₄	3.4	4.1	< 0.01	1.00		
Mobile Combustion: Road & Other	CH ₄	4.7	4.0	<0.01	1.00		
SF ₆ Emissions from Magnesium Production	SF ₆	5.4	2.4	< 0.01	1.00		
CO ₂ Emissions from Titanium Dioxide Production	CO ₂	1.3	2.0	<0.01	1.00		
Mobile Combustion: Aviation	N ₂ O	1.7	1.7	<0.01	1.00		
CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.5	<0.01	1.00		
CO ₂ Emissions from Phosphoric Acid Production	CO ₂	1.5	1.3	<0.01	1.00		
CO ₂ Emissions from CO ₂ Consumption	CO ₂	0.9	1.3	<0.01	1.00		
CO ₂ Emissions from Ferroalloys	CO ₂	2.0	1.2	<0.01	1.00		
CH ₄ Emissions from Iron and Steel Production	CH ₄	1.3	1.0	<0.01	1.00		
CH4 Emissions from Agricultural Residue Burning	CH ₄	0.7	0.7	<0.01	1.00		
Mobile Combustion: Marine	N ₂ O	0.7	0.7	<0.01			
					1.00		
N ₂ O Emissions from Agricultural Residue Burning	N ₂ O	0.4	0.4	< 0.01	1.00		
N ₂ O Emissions from Waste Incineration	N ₂ O	0.4	0.4	< 0.01	1.00		
CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO ₂	0.4	0.3	<0.01	1.00		
Mobile Combustion: Aviation	CH ₄	0.2	0.1	< 0.01	1.00		
Mobile Combustion: Marine	CH ₄	0.1	0.1	< 0.01	1.00		
CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0	<0.01	1.00		
TOTAL Note: Sinks (e.g., LLICE Landfill Carbon Storage) are not included.	1: 11:	6,129.1	6,934.6	1.00	_		

Table 1-16: 1990-2002 Key Source Tier 1 Analysis - Trend Assessment

PCC Source Categories	Table 1-16: 1990-2002 Key Source Her Lanalysis - Ir	Direct		Current Year		Percent	
PCC Source Categories					Trend		
Mobile Combustion: Road & Other Co. 1,233.4 1,534.4 0.02 17 17 17 17 17 18 18 18	IPCC Source Categories						
Co.2 Emissions from Stationary Combustion - Coal CO2 695.7 680.1 0.01 13 30 Co.2 Emissions from Stationary Combustion - Coal CO2 1,681.4 2,005.6 0.01 11 54 Co. Emissions from Stationary Combustion - Coal CO2 978.9 1,160.6 0.01 15 56 Co. Emissions from Stationary Combustion - Co 685.4 54.4 0.01 5 66 Co. Emissions from Coal Mining and Handling CH 81.9 52.2 0.01 5 75 Figure Emissions from Coal Mining and Handling CH 81.9 52.2 0.01 5 76 HFC-23 Emissions from Indept Fermentation in Dimestic Livestock CH 117.7 6 0.01 2 28 HF. EDISSIONS from Electrical Englignent Emissions from Electrical Englignent SF. 29.2 14.8 4.00 2 88 FL, Emissions from Alluminum Production NO 15.2 5.9 4.00 2 88 FC Emissions from Material English Common Production NO 15.2<							
Copenissions from Stationary Combustions			695.7	680.1	0.01	13	
Co. Emissions from Saled Water Disposal Sites		CO ₂	1,681.4	2,005.6	0.01	13	43
CH. Emissions from Solid Wasie Disposal Siles CO₂ Emissions from Coal Mining and Handling CO₂ 116.9 177.6 4.001 5 77. Fugilize Emissions Availation CO₂ 116.9 177.6 4.001 3 79. HFC-32 Emissions from HCFC-22 Manufacture HFCs SSo 19.8 4.001 2 88. HFC-32 Emissions from HCFC-22 Manufacture HFCs SSo 19.8 4.001 2 88. SFa Emissions from HCFC-22 Manufacture CH1. Emissions from Enteric Forentiation in Domestic Livestock CH1. Emissions from Enteric Forentiation in Domestic Livestock CH2. Emissions from Enteric Forentiation in Domestic Livestock CH3. 122.0 121.8 4.001 2 88. Fragilize Emissions from Matural Gas Operations CH2. 2 88. Fragilize Emissions from Matural Gas Operations CH3. 2 89. N.O Emissions from Oil Operations CO₂ 10.9 18.8 4.001 1 2 90. N.O Emissions from Waste Incineration CO₂ 10.9 18.8 4.001 1 92. CO₂ Emissions from Waste Incineration CO₂ 10.9 18.8 4.001 1 92. CO₂ Emissions from Cement Production CO₂ 10.9 18.8 4.001 1 93. CO₂ Emissions from Cement Production CO₂ 10.9 18.8 4.001 1 93. CO₂ Emissions from Audinum Production 1 92. CO₂ Emissions from Audinum Production 1 92. CO₂ Emissions from Manure Management CO₂ 10.9 18.8 4.001 1 95. CH4 Emissions from Manure Management CO₂ 10.9 18.8 4.001 1 95. CH4 Emissions from Manure Management CO₂ 10.9 18.7 4.001 1 95. CH4 Emissions from Minipsions fr	Emissions from Substitutes for Ozone Depleting Substances	Several	0.3	91.7	0.01	11	54
Co_ timissions from from and Steel Production Co_ 185.4 54.4 0.01 5 76 Mobile Combustions from Coal Mining and Handling CH4 81.9 52.2 0.01 5 76 Mobile Combustion Availation Co_ 176.9 177.6 <0.01 3 79 Ch_ timissions from Enteric Fermentation in Domestic Livestock CH4 117.9 114.4 <0.01 2 88 CH_ timissions from Enteric Fermentation in Domestic Livestock CH4 117.9 114.4 <0.01 2 88 STs_Emissions from Enteric Fermentation in Domestic Livestock CH4 117.9 114.4 <0.01 2 88 STs_Emissions from Natural Gas Operations CH4 122.0 121.8 <0.01 2 88 PF.C_ timissions from Aduption Gas Operations CH4 122.0 121.8 <0.01 2 88 PF.C_ timissions from Aduption Ado Production No.0 Emissions from Aduption Ado Production No.0 Emissions from Margin Enterial Color No.0 15.2 5.9 <0.01 1 97 Figilite Emissions from Margin Enterial Color No.0 15.2 5.9 <0.01 1 99 Figilite Emissions from Margin Enterial Color No.0 10.5 20.9 0.01 1 99 Figilite Emissions from Margin Enterial Color No.0 190.5 20.9 0.01 1 99 Figilite Emissions from Margin Enterial Color No.0 190.5 20.9 0.01 1 99 Figilite Emissions from Color Margin Enterial Color No.0 190.5 20.9 0.01 1 99 Figilite Emissions from Cement Production Color Emissions from Cement Production Color Emissions from Cement Production Color 190.3 17.7 4.001 1 99 Figilite Emissions from Margin Margin Enterial Color 190.3 17.7 4.001 1 99 Figilite Color No.0	CO ₂ Emissions from Stationary Combustion - Gas	CO ₂	978.9	1,160.6	0.01	7	61
Fugitive Emissions from Coal Mining and Handling		CH ₄	210.0	193.0	0.01	5	
Mobile Combustion Aviation	CO ₂ Emissions from Iron and Steel Production	CO ₂	85.4	54.4	0.01	5	
HFC 22 Emissions from HCFC-22 Manufacture CHL Emissions from Enteric Fermentation in Domestic Livostock SF, Emissions from Matural Gas Operations CH4 Figultive Emissions from Natural Gas Operations CH4 PFCS 18.1 12.2 12.18 4.001 2 88 PFC Emissions from Natural Gas Operations CH4 12.2 12.18 4.001 2 88 PFC Emissions from Multimum Production NO 15.2 5.9 0.001 1 90 NO Emissions from Matural Gas Operations CH4 28.9 23.2 0.001 1 92 CQ. Emissions from My Operations CQ. 10.9 18.8 0.001 19.9 10.9 1	Fugitive Emissions from Coal Mining and Handling						
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No Direct No. 15.2 5.9 4.0.01 1 91							
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Direct No Emissions from Agricultural Soils No 190.5 209.9 <0.01 1 94						1	92
CO2 missions from Cement Production CO2 missions from Nature Management N2O 72.3 77.4 <0.01 1 95 CH Emissions from Manure Management CH4 31.0 39.5 <0.01							
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PFC, HFC, and SF ₆ Emissions from Semiconductor Manufacture SF ₆ 2.9 4.4 <0.01 0 99 CO₂ Emissions from Ferroalloys CO₂ 2.0 1.2 <0.01 0 99 CO₂ Emissions from Ferroalloys CO₂ 2.0 1.2 <0.01 0 99 CO₂ Emissions from Soda Ash Manufacture and Consumption CO₂ 4.1 4.1 <0.01 0 99 CO₂ Emissions from Soda Ash Manufacture and Consumption CO₂ 1.3 2.0 <0.01 0 100 CH₄ Emissions from Itianium Dioxide Production CH₄ 1.3 1.0 <0.01 0 100 CH₄ Emissions from Itianium Dioxide Production CH₄ 1.3 1.0 <0.01 0 100 CD₂ Emissions from Manure Management N₂O 16.2 17.8 <0.01 0 100 CO₂ Emissions from Limestone and Dolomite Use CO₂ 5.5 5.8 <0.01 0 100 CO₂ Emissions from Limestone and Dolomite Use CO₂ 11.2 12.3 <0.01 0 100 CO₂ Emissions from Lime Production CO₂ 11.2 12.3 <0.01 0 100 CO₂ Emissions from Phosphoric Acid Production CO₂ 1.5 1.3 <0.01 0 100 CO₂ Emissions from Stationary Combustion N₂O 12.6 14.0 <0.01 0 100 CO₂ Emissions from Abandoned Coal Mines CH₄ 3.4 4.1 <0.01 0 100 CO₂ Emissions from CO₂ Consumption CO₂ 0.9 1.3 <0.01 0 100 CO₂ Emissions from CO₂ Consumption N₂O 1.7 1.7 <0.01 0 100 CO₂ Emissions from Petrochemical Production CH₄ 1.2 1.5 <0.01 0 100 CO₂ Emissions from Waste Incineration N₂O 1.7 1.7 <0.01 0 100 CO₂ Emissions from Stationary Combustion - Geothermal Energy CO₂ 0.4 0.3 <0.01 0 100 CO₂ Emissions from N₂O Product Usage CO₂ 0.4 0.3 <0.01 0 100 CO₂ Emissions from N₂O Product Usage CO₂ 0.4 0.3 <0.01 0 100 CO₂ Emissions from N₂O Product Usage CO₂ 0.4 0.3 <0.01 0 100 CO₂ Emissions from N₂O Product Usage CO₂ 0.4 0.3 <0.01 0 100 CO₂ Emissions from N₂O Product Usage CO₂ 0.4 0.3 <0.01 0 100 CO₂ Emissions from N₂O Carbide Production CH₄ 0.7 0.7 <0.01 0 100 CO₂ Emissions from N₂O Product Usage CO₂ 0.4 0.4 0.4 <0.01 0 100 CO₂ Emissions from N₂O Carbide Production CH₄ 0.7 0.7 <0.01 0 100 CO₂ Emissions from N₂O Carbide Production CH₄ 0.0 0.0 <0.01 0 100 CO₂ Emissions from N₂O Carbide Production CH₄ 0.0 0.0 <0.01 0 100 CO₂ Emissions from N₂O Carbide Production CH₄ 0.0 0.0 <0.01 0 100 CO₂ Emissions from N₂O Carbide Production CH₄ 0.0							
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CO2 Emissions from Soda Ash Manufacture and Consumption CO2 4.1 4.1 <0.01 0 99 CO2 Emissions from Titanium Dioxide Production CO2 1.3 2.0 <0.01							
CO2 Emissions from Titanium Dioxide Production CO2 1.3 2.0 <0.01 0 100 CH4 Emissions from Iron and Steel Production CH4 1.3 1.0 <0.01							
$ \begin{array}{c} \text{CH}_4 \text{ Emissions from Iron and Steel Production} & \text{CH}_4 & 1.3 & 1.0 & <0.01 & 0 & 100 \\ N_2O \text{ Emissions from Manure Management} & N_2O & 16.2 & 17.8 & <0.01 & 0 & 100 \\ CO_2 \text{ Emissions from Limestone and Dolomite Use} & CO_2 & 5.5 & 5.8 & <0.01 & 0 & 100 \\ CO_2 \text{ Emissions from Lime Production} & CO_2 & 11.2 & 12.3 & <0.01 & 0 & 100 \\ CO_2 \text{ Emissions from Lime Production} & CO_2 & 11.5 & 1.3 & <0.01 & 0 & 100 \\ Non-CO_2 \text{ Emissions from Phosphoric Acid Production} & CO_2 & 1.5 & 1.3 & <0.01 & 0 & 100 \\ Non-CO_2 \text{ Emissions from Stationary Combustion} & N_2O & 12.6 & 14.0 & <0.01 & 0 & 100 \\ Non-CO_2 \text{ Emissions from Abandoned Coal Mines} & CH_4 & 3.4 & 4.1 & <0.01 & 0 & 100 \\ CO_2 \text{ Emissions from CO}_2 \text{ Consumption} & CO_2 & 0.9 & 1.3 & <0.01 & 0 & 100 \\ CO_2 \text{ Emissions from CO}_2 \text{ Consumption} & N_2O & 1.7 & 1.7 & <0.01 & 0 & 100 \\ Mobile Combustion: Aviation & N_2O & 1.7 & 1.7 & <0.01 & 0 & 100 \\ CH_4 \text{ Emissions from Waste Incineration} & N_2O & 0.4 & 0.4 & <0.01 & 0 & 100 \\ N_2O \text{ Emissions from Waste Incineration} & N_2O & 0.4 & 0.4 & <0.01 & 0 & 100 \\ CO_2 \text{ Emissions from Stationary Combustion - Geothermal Energy} & CO_2 & 0.4 & 0.3 & <0.01 & 0 & 100 \\ CO_2 \text{ Emissions from Magricultural Residue Burning} & CH_4 & 0.7 & 0.7 & <0.01 & 0 & 100 \\ Mobile Combustion: Aviation & CH_4 & 0.0 & 0.0 & <0.01 & 0 & 100 \\ Mobile Combustion: Aviation & N_2O & 0.4 & 0.4 & <0.01 & 0 & 100 \\ N_2O \text{ Emissions from Agricultural Residue Burning} & N_2O & 0.4 & 0.4 & <0.01 & 0 & 100 \\ N_2O \text{ Emissions from Agricultural Residue Burning} & N_2O & 0.4 & 0.4 & <0.01 & 0 & 100 \\ N_2O \text{ Emissions from Agricultural Residue Burning} & N_2O & 0.4 & 0.4 & <0.01 & 0 & 100 \\ N_2O \text{ Emissions from Agricultural Residue Burning} & N_2O & 0.4 & 0.4 & <0.01 & 0 & 100 \\ N_2O \text{ Emissions from Agricultural Residue Burning} & N_2O & 0.4 & 0.4 & <0.01 & 0 & 100 \\ N_2O \text{ Emissions from Agricultural Residue Burning} & N_2O & 0.4 & 0.4 & <0.01 & 0 & 100 \\ N_2O \text{ Emissions from Agricultural Residue Burning} $							
$\begin{array}{c} N_2O \ Emissions \ from \ Manure \ Management \\ CO_2 \ Emissions \ from \ Limestone \ and \ Dolomite \ Use \\ CO_2 \ Emissions \ from \ Limestone \ and \ Dolomite \ Use \\ CO_2 \ Emissions \ from \ Lime \ Production \\ CO_2 \ Emissions \ from \ Lime \ Production \\ CO_2 \ Emissions \ from \ Phosphoric \ Acid \ Production \\ CO_2 \ Emissions \ from \ Phosphoric \ Acid \ Production \\ CO_2 \ Emissions \ from \ Phosphoric \ Acid \ Production \\ CO_2 \ Emissions \ from \ Phosphoric \ Acid \ Production \\ N_2O \ 12.6 \ 14.0 \ <0.01 \ 0 \ 100 \\ Fugitive \ Emissions \ from \ Abandoned \ Coal \ Mines \\ CH_4 \ 3.4 \ 4.1 \ <0.01 \ 0 \ 100 \\ Fugitive \ Emissions \ from \ Abandoned \ Coal \ Mines \\ CO_2 \ Emissions \ from \ CO_2 \ Consumption \\ CO_2 \ Emissions \ from \ CO_2 \ Consumption \\ Mobile \ Combustion: \ Aviation \\ CO_2 \ Emissions \ from \ Petrochemical \ Production \\ N_2O \ Emissions \ from \ Petrochemical \ Production \\ N_2O \ Emissions \ from \ Waste \ Incineration \\ N_2O \ Emissions \ from \ Waste \ Incineration \\ N_2O \ Emissions \ from \ Stationary \ Combustion - Geothermal \ Energy \\ CO_2 \ 0.4 \ 0.4 \ 0.4 \ <0.01 \ 0 \ 100 \\ CO_2 \ Emissions \ from \ Agricultural \ Residue \ Burning \\ CH_4 \ 0.7 \ 0.7 \ <0.01 \ 0 \ 100 \\ Mobile \ Combustion: \ Aviation \\ CH_4 \ Emissions \ from \ Agricultural \ Residue \ Burning \\ N_2O \ 0.4 \ 0.4 \ 0.4 \ <0.01 \ 0 \ 100 \\ N_2O \ Emissions \ from \ Agricultural \ Residue \ Burning \\ N_2O \ 0.4 \ 0.4 \ 0.4 \ <0.01 \ 0 \ 100 \\ N_2O \ Emissions \ from \ Agricultural \ Residue \ Burning \\ N_2O \ 0.4 \ 0.4 \ 0.4 \ <0.01 \ 0 \ 100 \\ N_2O \ Emissions \ from \ Agricultural \ Residue \ Burning \\ N_2O \ 0.4 \ 0.4 \ 0.4 \ <0.01 \ 0 \ 100 \\ N_2O \ Emissions \ from \ Agricultural \ Residue \ Burning \\ N_2O \ 0.4 \ 0.4 \ 0.4 \ <0.01 \ 0 \ 100 \\ N_2O \ Emissions \ from \ Agricultural \ Residue \ Burning \\ N_2O \ 0.4 \ 0.4 \ 0.4 \ <0.01 \ 0 \ 100 \\ N_2O \ Emissions \ from \ Agricultural \ Residue \ Burning \\ N_2O \ 0.4 \ 0.4 \ 0.4 \ <0.01 \ 0 \ 100 \\ N_2O \ Emissions \ from \ Agricultural$							
$ \begin{array}{c} \text{CO}_2 \text{ Emissions from Limestone and Dolomite Use} & \text{CO}_2 & 5.5 & 5.8 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from Lime Production} & \text{CO}_2 & 11.2 & 12.3 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from Phosphoric Acid Production} & \text{CO}_2 & 1.5 & 1.3 & <0.01 & 0 & 100 \\ \text{Non-CO}_2 \text{ Emissions from Phosphoric Acid Production} & \text{N}_2\text{O} & 12.6 & 14.0 & <0.01 & 0 & 100 \\ \text{Fugitive Emissions from Abandoned Coal Mines} & \text{CH}_4 & 3.4 & 4.1 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from CO}_2 \text{ Consumption} & \text{CO}_2 & 0.9 & 1.3 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from CO}_2 \text{ Consumption} & \text{N}_2\text{O} & 1.7 & 1.7 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Aviation} & \text{N}_2\text{O} & 1.7 & 1.7 & <0.01 & 0 & 100 \\ \text{CH}_4 \text{ Emissions from Waste Incineration} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{N}_2\text{O} \text{ Emissions from Waste Incineration} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from N}_2\text{O Product Usage} & \text{N}_2\text{O} & 0.4 & 0.3 & <0.01 & 0 & 100 \\ \text{N}_2\text{O} \text{ Emissions from Agricultural Residue Burning} & \text{CH}_4 & 0.7 & 0.7 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Aviation} & \text{CH}_4 & 0.2 & 0.1 & <0.01 & 0 & 100 \\ \text{CH}_4 \text{ Emissions from Silicon Carbide Production} & \text{CH}_4 & 0.0 & 0.0 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0.0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0.0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0.0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.0 & 100 \\ \text{Mobile Combustion: Marine} & C$							
$ \begin{array}{c} \text{CO}_2 \text{ Emissions from Lime Production} & \text{CO}_2 & 11.2 & 12.3 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from Phosphoric Acid Production} & \text{CO}_2 & 1.5 & 1.3 & <0.01 & 0 & 100 \\ \text{Non-CO}_2 \text{ Emissions from Stationary Combustion} & \text{N}_2\text{O} & 12.6 & 14.0 & <0.01 & 0 & 100 \\ \text{Fugitive Emissions from Abandoned Coal Mines} & \text{CH}_4 & 3.4 & 4.1 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from CO}_2 \text{ Consumption} & \text{CO}_2 & 0.9 & 1.3 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Aviation} & \text{N}_2\text{O} & 1.7 & 1.7 & <0.01 & 0 & 100 \\ \text{CH}_4 \text{ Emissions from Petrochemical Production} & \text{CH}_4 & 1.2 & 1.5 & <0.01 & 0 & 100 \\ \text{N}_2\text{O Emissions from Waste Incineration} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from Waste Incineration} & \text{N}_2\text{O} & 0.4 & 0.3 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from Stationary Combustion - Geothermal Energy} & \text{CO}_2 & 0.4 & 0.3 & <0.01 & 0 & 100 \\ \text{N}_2\text{O Emissions from N}_2\text{O Product Usage} & \text{N}_2\text{O} & 4.3 & 4.8 & <0.01 & 0 & 100 \\ \text{CH}_4 \text{ Emissions from Agricultural Residue Burning} & \text{CH}_4 & 0.7 & 0.7 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Aviation} & \text{CH}_4 & 0.2 & 0.1 & <0.01 & 0 & 100 \\ \text{CH}_4 \text{ Emissions from Silicon Carbide Production} & \text{CH}_4 & 0.0 & 0.0 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{N}_2\text{O Emissions from Agricultural Residue Burning} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ Mobile$						0	100
$ \begin{array}{c} \text{CO}_2 \text{ Emissions from Phosphoric Acid Production} & \text{CO}_2 \\ \text{Non-CO}_2 \text{ Emissions from Stationary Combustion} & \text{N}_2\text{O} \\ \text{Non-CO}_2 \text{ Emissions from Stationary Combustion} & \text{N}_2\text{O} \\ \text{Fugitive Emissions from Abandoned Coal Mines} \\ \text{CH}_4 & 3.4 & 4.1 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from CO}_2 \text{ Consumption} & \text{CO}_2 & 0.9 & 1.3 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Aviation} & \text{N}_2\text{O} & 1.7 & 1.7 & <0.01 & 0 & 100 \\ \text{CH}_4 \text{ Emissions from Petrochemical Production} & \text{CH}_4 & 1.2 & 1.5 & <0.01 & 0 & 100 \\ \text{N}_2\text{O Emissions from Waste Incineration} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from Waste Incineration} & \text{N}_2\text{O} & 0.4 & 0.3 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from Stationary Combustion - Geothermal Energy} & \text{CO}_2 & 0.4 & 0.3 & <0.01 & 0 & 100 \\ \text{CO}_2 \text{ Emissions from N}_2\text{O Product Usage} & \text{N}_2\text{O} & 4.3 & 4.8 & <0.01 & 0 & 100 \\ \text{N}_2\text{O Emissions from Agricultural Residue Burning} & \text{CH}_4 & 0.7 & 0.7 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Aviation} & \text{CH}_4 & 0.2 & 0.1 & <0.01 & 0 & 100 \\ \text{CH}_4 \text{ Emissions from Silicon Carbide Production} & \text{CH}_4 & 0.0 & 0.0 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{N}_2\text{O} & 0.4 & 0.4 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.1 & <0.01 & 0 & 100 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.1 & <0.01 & 0.1 & 0.1 \\ \text{Mobile Combustion: Marine} & \text{CH}_4 & 0.1 & 0.1 & 0.1 & <0.01 & 0$	CO ₂ Emissions from Lime Production			12.3	< 0.01	0	
Non-CO2 Emissions from Stationary Combustion N2O 12.6 14.0 <0.01 0 100 Fugitive Emissions from Abandoned Coal Mines CH4 3.4 4.1 <0.01	CO ₂ Emissions from Phosphoric Acid Production						100
Fugitive Emissions from Abandoned Coal Mines CH_4 3.4 4.1 <0.01 0 100 CO_2 Emissions from CO_2 Consumption CO_2 0.9 1.3 <0.01 0 100 CO_2 Emissions from CO_2 Consumption CO_2 0.9 1.3 <0.01 0 100 CO_2 Emissions from Petrochemical Production CO_2 1.7 1.7 <0.01 0 100 CO_2 Emissions from Petrochemical Production CO_2 1.7 1.7 <0.01 0 100 CO_2 Emissions from Waste Incineration CO_2 1.5 <0.01 0 100 CO_2 Emissions from Stationary Combustion - Geothermal Energy CO_2 0.4 0.4 0.3 <0.01 0 100 CO_2 Emissions from CO_2 Emissions from CO_2 1.3 4.8 <0.01 0 100 CO_2 Emissions from Agricultural Residue Burning CO_2 1.3 4.8 <0.01 0 100 CO_2 Emissions from Agricultural Residue Burning CO_2 1.3 4.8 <0.01 0 100 CO_2 Emissions from Agricultural Residue Burning CO_2 1.1 <0.01 0 100 CO_2 1.0 CO_2						0	100
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			3.4	4.1	< 0.01	0	100
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			0.9			0	100
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Mobile Combustion: Aviation		1.7			0	100
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	CH ₄ Emissions from Petrochemical Production	CH ₄	1.2	1.5	< 0.01	0	100
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	N ₂ O Emissions from Waste Incineration	N_2O	0.4	0.4	< 0.01	0	100
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	CO ₂ Emissions from Stationary Combustion - Geothermal Energy	CO_2		0.3		0	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			4.3	4.8	< 0.01	0	100
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$						0	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Mobile Combustion: Aviation	CH ₄	0.2	0.1	< 0.01	0	100
N_2O Emissions from Agricultural Residue Burning N_2O 0.4 0.4 <0.01 0 100 Mobile Combustion: Marine CH_4 0.1 0.1 <0.01 0 100	CH ₄ Emissions from Silicon Carbide Production	CH ₄	0.0	0.0		0	100
Mobile Combustion: Marine CH ₄ 0.1 0.1 < 0.01 0 100	Mobile Combustion: Marine	N_2O	0.4	0.4		0	
	N ₂ O Emissions from Agricultural Residue Burning					0	100
TOTAL 6,129.1 6,934.6 0.10		CH ₄				0	100
Note: Sinks (a.g. LLICE Landfill Carbon Storage) are not included in this analysis				6,934.6	0.10		

References

Flugsrud, K., W. Irving, and K. Rypdal (1999) *Methodological Choice in Inventory Preparation. Suggestions for Good Practice Guidance.* Statistics Norway Department of Economic Statistics. 1999/19.

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